THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLVII. SATURDAY, AUGUST 15, 1885. No. 7.

ORIGINAL LECTURES.

SOME FORMS OF MYELITIS, THEIR DIAGNOSIS FROM EACH OTHER AND FROM HYSTERICAL PARAPLEGIA.

Two Clinical Lectures delivered at the Philadelphia Hospital.

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(Reported by William H. Morrison, M.D.)

LECTURE I.

GENTLEMEN: We have in this great hospital, as those of you who have passed through its wards well know, illustrations of almost all forms of spinal disorder. Atrophies and hypertrophies, scleroses of every name and description, spinal traumatisms and pseudo-traumatisms, diseases functional and reflex, tumors, hemorrhages, and softenings, inflammations of the cord and of its membranes—throughout the whole list, are to be found here. Sometimes cases of almost every type will be within these walls at one time. Many of these forms of spinal disease are incurable. Of the cases which cannot be entirely cured, some, however, can be much benefited by treatment. In a hospital containing so many incurables, care and vigilance must be exercised, or cases that can be cured will be left to lapse to an uncalled-for fate, for want of recognition and treatment. Sometimes in private practice these cases, desperate but not beyond help, are passed by as incurable through ignorance, indifference, carelessness, or lack of thoroughness in investigation. If we had the time, I could give you illustrations of this fact drawn from experience, both outside and inside of the hospital.

The diseases to which I more especially wish to call attention during this and the following lecture are the different forms of myelitis and their counterfeits. I consider this subject of extraordinary importance to the general practitioner, largely because in some of its forms it is frequently a curable affection.

The term myelitis is applied to many disorders—forms of inflammation of the spinal cord. You may have a myelitis which is chronic or acute, which is generalized or localized, which is systemic, or mixed, or compound. You may have, in the technical language of the books of to-day, either poliomyelopathies or leucomyelopathies, which terms simply mean myelopathies, or spinal diseases, of the *gray matter*, from πολιός, "gray," or of the *white matter*, from λευκός, "white." You may have a diffused myelitis. The various forms of sclerosis are considered by some to be special forms of chronic myelitis, by others to be irritant morbid processes, intermediate between inflammation and simple atrophy[1]—but on this branch of the subject I shall not now enter.

[1] Althaus.

The first case which I shall bring before you, is one which has been in the hospital several months. It is an admirable illustration of

DIFFUSED MYELITIS FROM ARSENICAL POISONING.

The notes of the case have been carefully taken by two of the resident physicians, Dr. E. W. Evans and Dr. Alice M. Farnham.

Case 1.—M., aged 35, had always enjoyed fair health until nearly one year ago, when, after a prolonged spree, he took a quantity of arsenious acid. Ten hours later, the symptoms of acute arsenical poisoning presented themselves. He was removed to a hospital and rapidly improved as regards the acute symptoms, but one week later he began to notice tingling sensations in the lower extremities. This was soon followed by loss of power in the legs, so that he was unable to stand. With this was associated a sensation as though the skin of the legs was distended with fluid, although no swelling was present. Loss of sensation from the knees downward was absolute.

In the upper extremities neither pain nor disturbance of sensation was present, but paresis, most marked in the extensor muscles of the forearms and hands, caused a bilateral wrist drop. Occasionally he had jerking of the legs, which was more liable to occur during sleep than when he was awake. This condition continued for about four months, when a feeling of formication made its appearance, and since then sensation has been gradually returning.

Three weeks after the poison had been taken, the feet assumed a brownish-yellow hue, and on being soaked, casts of the toes and soles of the feet came away. Desquamation of the hands also occurred, but not to so marked an extent. The finger- and toe-nails presented transverse white lines, but we cannot learn when these first appeared. The nails also became rough and deformed.

He was admitted to this hospital five months after taking the arsenic. General emaciation was very manifest, and wasting was advanced in the legs. The following are some of the measurements which were taken, both sides being practically the same: Thigh, 17¼ in.; calf, 11 in.; arm, 9¼ in.; forearm, 6½ in.

The paralysis of the extensors of the forearms was still marked. Loss of power in the hands was almost complete, but flexion at the elbow could still be performed.

The lower extremities were paralyzed from the knees downward, the patient being entirely unable to move the toes or feet. Movements of the leg on the thigh and of the thigh on the pelvis could be performed. The limbs showed a tendency to external rotation. The feet assumed an equino-varus position. The spontaneous jerkings of the limbs which had been observed at an earlier stage of the disease had almost ceased. At this time, he often complained of pain in the patellar region, which was sometimes so severe as to keep him awake.

Desquamation of the hands and feet continued, but not to so marked a degree. The bowels were variable, sometimes requiring cathartics and sometimes astringents. Urine was passed freely and without pain; its specific gravity was 1020; it contained no albumen or sugar. The microscope revealed large quantities of amorphous urates, uric acid, oxalates, and pus cells.

Observations on the temperature of the skin were made, showing, for instance, that on the dorsum of both hands it was 84°, while on the dorsum of the feet it was 90.5° F. The patient usually complained of cold feet.

In some parts of the hand and forearm, the sensibility approached almost to hyperæsthesia. There was anæsthesia of the skin covering the knee, but over the anterior and posterior aspects of the leg sensation was present. In these situations the patient was abnormally sensitive to a pinch. The points of the instrument were indistinctly felt on the feet.

Heat and cold could be distinguished in all the fingers with the exception of the index-fingers of both hands. In testing the feet, it was found that cold could be distinguished in all except the fourth and little toes, while heat was recognized in all but the second toe.

Testing the paralyzed parts with weights, it was found that the feet could not feel the pressure of less than from one-half to two pounds. The right leg required one and one-fourth pounds, while the left could detect one-fourth of a pound, the hand recognizing a weight still smaller.

For three weeks after the acute attack, he had no sexual desire, although evidences of power existed; and both desire and power have since been present.

The morning temperature was taken for ten days after admission and averaged 98°; the evening, 99°, varying from 97.6° to 99.6° F. The pulse averaged in the morning 90 per minute, in the evening 100, varying between 82 and 110, and always being more rapid in the evening.

Investigation of the reflexes showed the plantar and patellar absent in both legs, the cremaster, gluteal, abdominal, and epigastric present, but weak; the scapular reflex about normal, and ankle clonus and gastrocnemial clonus absent.

Farado-contractility was about normal in the arms with the slowly and rapidly interrupted current. In both forearms the slowly interrupted current produced no contraction. With the rapidly interrupted current there was barely perceptible contraction, but the tingling was distinctly felt. In the right thigh the contraction to both currents was lessened. In the left thigh the reactions were about normal. No contraction could be produced in either the right or left leg below the knee, with either the rapidly or slowly interrupted current.

The muscles below the knees responded feebly to a moderate galvanic current, the reactions being markedly those of degeneration.

The patient has decidedly improved in some respects —in the use of his arms, in large movement of the legs, and in sensory disturbances, for instance, but his feet and legs are still paralyzed and show vaso-motor and trophic changes. Testing with the galvanic current, I can get only a feeble contraction, and that at anodal opening. The prognosis is doubtful.

This patient has had a generalized myelitis, an acute diffused myelitis which has become chronic, recovering in large part so far as the upper part of the cord is concerned, and in a less measure in the lower cord.

I present this patient at the start of the discussion of myelitis, because the case is one in which we know the exact mode of origin of the affection, and are able to study in the minutest detail the phenomena presented. The cause of the affection was poisoning with arsenic. About two years ago I gave an account of a number of cases of arsenical paralysis,[1] which occurred as the result of the wholesale poisoning of a family at Norristown, Pennsylvania. One of these was almost the counterpart of the case before you. The patient exhibited extensive paralysis, and reflex, vaso-motor, trophic, and sensory disorders in both upper and lower extremities, similar to and almost as complete as those here presented. He has made a good recovery and is now practising his profession, that of law. I have seen this gentleman within a few days, and the only symptoms left are a slight want of power in dorsal flexion of the feet, and a feeling as if the soles and one half of the dorsal surfaces of the feet were encased.

What I wish most to impress and emphasize with this case before us, are the differential diagnostic features of diffused myelitis, whether acute or chronic. You have here a history and a present condition which show involvement of all parts of the spinal cord in an inflammatory process—symptoms both of irritation and sensory impairment, in the pains, the hyperæsthesia, the anæsthesias, the changes in the power of recognizing pressure, cold, and heat; symptoms also of motor, vaso-motor, trophic, and reflex affections in the twitchings, cramps, paralysis, lowered temperature, nail-bands, mould-like desquamation, abolished knee-jerks, and advanced reaction of degeneration. Bowels and bladder have also been to some extent involved, as shown by the long-continued torpor of the former, and by the evidences of cystitis.

SUBACUTE OR CHRONIC GENERALIZED MYELITIS OF THE ANTERIOR HORNS.

Instead of having an acute, subacute, or chronic diffused myelitis, you may have an acute, subacute, or chronic inflammation of certain physiological regions of the cord, but let us pass at once to the consideration of another case, which I will have brought to the arena and will study before you. The history of the case is as follows:

Case 2.—M. M., æt. 33, white, widow; occupation, general housework; has had several children, and one spontaneous abortion five months ago. Her husband is dead, but was healthy. Her mother and several sisters died of phthisis; her father of typhoid fever. She had always been healthy until seven months ago, when she contracted chancroids. She was admitted to the Philadelphia Hospital two weeks later, and examination showed chancroids and fistula in ano. At this time her appetite was poor, she had lost some flesh, and was anæmic. While under treatment she was taken with diarrhœa, and was put to bed. About the time the diarrhœa was checked she began to notice burning pains in the palms of the hands and the soles of the feet, with swelling of

[1] Transactions of the College of Physicians of Philadelphia, third series, vol. vi., 1883. Also, Journal of Nervous and Mental Diseases, January, 1883.

the parts. She also had burning pains down the anterior surface of the tibia and the posterior portion of the ulna and radius, and girdling pain in the lumbar region. Loss of motion in both upper and lower extremities was soon noticed, but no loss of sensation. The bladder and bowels were not affected. The nails of both fingers and toes presented well-marked white cross-lines. The left side was apparently most affected. Both the hands and feet were cold. Soon a tendency to rotation outwards appeared, and the feet assumed a talipes equinus position.

Until about four months since, she remained about the same, or possibly got a little worse. Since then she has slowly improved, with periods of partial relapse.

Without giving the history further, you will have observed, if you have paid close attention, that the woman was in good general health up to a certain period, when she contracted chancroids. She had not true chancres, and no secondary or tertiary syphilitic symptoms. Bear this point in mind, and do not be misled into making positively a diagnosis of spinal syphilis in this case. While in the hospital she had an attack of diarrhœa, and shortly after partially lost the use of the limbs.

So far as the upper half of the body is concerned, the improvement has been great. The pains have almost entirely disappeared. The transverse lines, as the nails have grown out, no longer are seen.

I will now examine the lower extremities. Looking at the limbs, the first thing which attracts attention is the position which they have assumed. You see the tendency to the equino-varus position—the turning inward and downward of the feet. This is present both in organic and in functional or hysterical disorders. In some recent works on spinal diseases, two pictures are shown side by side; one, of the position of the feet in a form of true myelitis; the other, the position in a hysterical paraplegic. In both, the patient sitting, the feet have assumed this peculiar inward-turning position.

Let us now test the power of motion. She can draw up both legs with the pelvic and some of the thigh muscles, without trouble. Examining the muscles below the knee, I find that, on the left side, she is unable to make dorsal flexion. A scarcely perceptible movement is made, but paralysis of the anterior tibial, peronei, and extensors of the toes is almost complete. She is able, to some extent, to use the gastrocnemius, soleus, and posterior tibial muscles. On the right side, there is only a slight attempt at dorsal flexion, but she can use the posterior group of muscles fairly well.

You observe complete absence of the knee-jerk on both sides, and also of ankle-clonus—but this is very rarely present when the patellar response is absent. A curious fact is that the skin reflexes are sometimes present when the other reflexes are absent. Some plantar reflex is here present.

As far as the general determination of sensation goes, she feels the æsthesiometer in the soles of the feet and elsewhere. The skin seems to retain its sensation. She can discriminate the compass points fairly well. Impressions reach the brain promptly. In this hospital are cases in which from two to fifteen seconds, or even more, are occupied in the transmission of impressions from the periphery to the brain. This is due often not so much to loss of sensation at the periphery, as to morbid obstacles—nodules of sclerosis, for instance—in the highways over which the impressions are carried. In this patient, however, I cannot determine any retardation of the conduction of sensation.

The electrical condition in such a case should always be carefully studied. It is one of the three or four most important diagnostic indications. The tests will be made before you, the farado-contractility first engaging our attention. One electrode is to be applied to an indifferent spot—that is, to one not connected by nervous channels with the muscles which it is desired to test; also to a spot not too near. It may be placed on the sacrum or on the sternum. The second electrode is to be applied to the supplying nerve-trunk, to the motor point, or to the belly of the muscle. I now test the farado-contractility of the tibialis anticus, the extensor digitorum communis longus, the extensor hallucis, and the peroneus longus and peroneus brevis muscles. A movement is produced as the current-strength is increased, but it is not the physiological movement of these muscles. The foot is extended and adducted. This is due to the extra polar diffusion of the current inducing contraction of the posterior group of muscles—the gastrocnemius, soleus, and posterior tibial. Farado-contractility is present in this muscular group, but the muscles under trial give no movement. It is an important practical point to remember that in testing the electrical state of certain muscles, while these may not respond, others close by may contract, and thus mislead the operator.

In determining the reactions to galvanism, a battery of from twenty to sixty cells is required. A few minutes suffice for a general diagnostic determination of this point, but a much longer time is needed for a minute record of the electrical condition. Two electrodes are used. One is the ordinary sponge electrode; the other may be like this in my hand, which is a carbon electrode covered with chamois, and provided with an interrupting handle. The pedal electrode of Dr. Morris J. Lewis, of this city, is a most convenient instrument when you have no assistant. The sponge electrode is to be placed at an indifferent spot, and a general determination of galvano-contractility made. It is almost absent in the same groups which showed entire absence to faradism. Having determined this, the reactions of degeneration are sought. In healthy nerves and muscles a certain definite response is obtained according as the current is closed or opened at cathode or anode with a current of medium strength—*i. e.*, one just capable of causing fair contraction. You get the best contraction with the closure of the cathode. Next, in actual experience with patients, comes anodal closure, although anodal opening is second physiologically. Anodal opening is third; and, finally, we have cathodal opening, which, with a current of ordinary strength, would cause no movement. Any reversal of this order indicates a reaction of degeneration—for instance, if with a current of medium strength the anodal closure contraction is greater than cathodal closure contraction. If the anodal opening contraction is greater than either of the two just mentioned, you have a still more marked reaction of degeneration. If you get that which is obtained only when the muscle is doomed, viz., cathodal opening contraction the most marked, you have a complete reversal of the normal formula. It is not my intention to dilate fully on this topic, but I simply want to say enough to enable you to understand this case. I

will test the paralyzed muscles of the leg, applying these principles. No contraction is visible in the anterior muscles below the knee on cathodal closure or opening. The latter, of course, we did not expect. There is slight contraction on anodal opening and closure. Reactions of degeneration are present.

What is the nature of this case? Here are motor paralysis, complete absence of tendon responses, with retention of the skin reflexes; and vaso-motor and trophic changes, as indicated by the color of the skin, change of temperature, and by some wasting; absolute loss of farado-contractility, and marked reactions of degeneration. No anæsthesia is present. This is undoubtedly, in the first place, a case of organic disease. It is, secondly, a spinal affection. The trophic, motor, and reflex disorders, and reaction of degeneration, show that it is an affection of the anterior horns of the cord in large part, if not altogether. It is a case of generalized disease of this region, as both arms and legs have been affected. [This case, since the delivery of the lecture, has made a complete recovery, chiefly under the use of heat and cold to the spine, ergot, mercury, bromides, iodides, and galvanism.]

This disease is not seen often in clinics, but it is of great importance, and not extremely rare. The best name for it is *subacute or chronic generalized myelitis of the anterior horns*. The name gives at once the features of the disease. It is one of the diseases which Duchenne described under the head of *general subacute anterior spinal paralysis*. It is also known as *subacute or chronic anterior polio-myelitis*, and *chronic atrophic spinal paralysis*. It is one of the forms of spinal adult paralysis, but the best names are the first or the last.

I shall take this disease as my standard of comparison in discussing the problems of diagnosis which I have chosen as our topic for these lectures. I do this because of its clear and definite characters, and because, also, it is particularly liable to be confounded with other forms of myelitis and with hysterical paralysis.

Before, however, going on with the discussion, let me read to you the history of another case of the same affection. This was a private patient, a highly intelligent lady, who wrote out for me an account of her case from the beginning. The record is particularly interesting because of the details as to subjective symptoms —details which we are not usually able to obtain in reliable form from the ordinary run of hospital patients.

Case 3.—A young lady, recently married. Her first feeling of sickness came on with fever, severe headache, nausea, and pains in the back and limbs; finally resulting in a steady fever of a typhoidal type. Her only recollections of that time were of terrible sinking spells, and a constant feeling of prostration. She was confined to bed for two months, and one month later went for a week to the seashore. She felt perfectly well while there. It was, however, rainy and damp all the time.

Shortly after her return, she found that the slightest exertion, either in riding or walking, tired her and brought on pain in the left lumbar region extending down the leg to the foot. About five years before this, she had had an attack of "gravel," and since then had been subject, at different times, to pain in the left side and leg.

Two months after convalescing from the fever, and six weeks after returning from the seashore, she was attacked with nausea, severe pain in the stomach, and diarrhœa, which lasted about three weeks. About this time the pain in the loins began, on both sides (although the left side was always the most painful), and was so severe that the only relief she had was when under the influence of hypodermics of morphia. This trouble lasted about four weeks. She also at this time had an excessive irritation of the skin. Although it was in July, and the weather exceedingly hot, she felt cold all the time. It seemed impossible to keep warm. She almost constantly had cold chills, as if some one was pouring ice-water over her. Her limbs also jerked constantly in her sleep. Her feet had a numb feeling.

She was taken with spasms, slight at first, but gradually increasing in strength. They lasted two weeks, and then ceased for a week, when one came on, just after taking a hypodermic to relieve the pain in the small of the back. This was the last spasm she ever had, as well as the most severe. Her nurse said that she was totally unconscious in it, and that her feet were drawn almost to the back of her head, her mouth also being drawn to one side. After that her feet and limbs began to pain her and to be very sensitive to the touch, the pain gradually increasing until the agony became almost indescribable, especially in both great toes, the pain feeling "as if some one was forcing a large pin under the nail, and tearing it from the flesh."

She lost the power of walking, or even standing, and for about six weeks was obliged to lie on her back, as it seemed to increase the pain to lie on either side. Her hands and arms also pained her, although not nearly so much as her feet and legs. She, however, also lost the power of using the hands and arms, and was obliged to wear gloves, as the sheets, and in fact everything that touched her, felt so uncomfortably cold. This cold feeling lasted with her for three months. About the time her feet began hurting her the pain in the small of her back ceased.

About the first of August, a little more than two months after the onset of her attack, she found she could not put her feet to the floor; the blood rushed to them so that they were almost of a purple color. From the first time her feet began troubling her, the pain never for one instant left them. She nearly lost all power in them, and the soreness still continued in her feet, and as far up as her knees. She also suffered great pain in the hips, and at the lower end of the backbone. Her muscles contracted, so that she could not straighten out her feet, which at one time were very much curved.

The pain only began to be noticeably less severe about seven months after her last illness began. And on the first day of February she stood alone, the first time for nearly eight months; and on the tenth day of the same month walked a few steps with the help of a Darrach wheel crutch, although the muscles were still so contracted under her knees as to cause her great pain whenever she attempted to walk. After this she began slowly but surely to improve, and in about six months was entirely well.

For several months, after using much exercise, and also toward evening, the limbs would burn and throb very much, and the only relief found was in having them rubbed.

This patient was under my care, in conjunction with other physicians, for several months, until her recovery. Beside the symptoms, as above enumerated by herself, she had lost knee-jerk for both sides, and the reactions of degeneration. Ergot, belladonna, morphia, bichloride of mercury in small dose, iodide of potassium, massage, and Swedish movements, with galvanic electricity, were the agencies chiefly used in her treatment. These measures, with rest, cupping, and the alternate application of ice and hot water to the spine, are chiefly to be depended on in the treatment of myelitis.

ORIGINAL ARTICLES.

HARD CHANCRE OF THE TONSIL.

BY FRANK DONALDSON, JR., B.A., M.D.,
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THOUGH hard chancre of the tonsil is by no means so infrequent as was formerly supposed, its etiology, symptoms, and appearance are so variable, and its positive diagnosis often so difficult, that the case given below may justify a résumé of the subject as it stands to-day; particularly, as I find in English nothing beyond mere records of cases.

The patient, a prostitute, æt. 29, presented herself at my clinic April, 21st, complaining of sore throat; and gave me the following history: At sixteen she had a sore on her genitals, and was treated, she said, by a physician now dead, for syphilis, who after a time pronounced her cured; at any rate, no constitutional symptoms had at any time developed. She remembered no particulars of her sickness, so many years having elapsed, and could give me no further information beyond the statement of her physician as above.

Having been ill with peritonitis in the University hospital during February, and having suffered constantly with great pain and tenderness over the abdomen since her dismissal in March, she had been unable to ply her vocation, and told me she had had no sexual connection whatsoever since January 28th. In the house to which she returned after her acute illness, there was a man who was suffering from a severe attack of syphilis, with "sore throat and sores in his mouth." Both she herself and the only other woman in the house were fully aware of his condition, having been warned by him not to use his tumbler, knife, etc. Fearful of contracting the disease, my patient had taken pains to avoid using any thing that he might have touched, but had on several occasions, when "skylarking," kissed him in the mouth again and again, and though she would not confess it, resorted, I fear, to disgusting practices. Early in April her throat became sore and uncomfortable on swallowing, and a few days later she noticed a sore on her upper lip. Her throat had gradually become worse until she was led to seek relief.

On examination, the lesion on the upper lip was found to be a superficial erosion with a reddened, densely indurated base discharging a scanty serosanious fluid, and was beyond doubt a hard chancre. The lesion upon the left tonsil, in whose character we are more deeply interested, was a ragged pultaceous ulcer, grayish-white, and not deeply excavated. The tonsil itself was somewhat enlarged; owing to the situation of the ulcer and the natural resistance of the hypertrophied gland the exact degree of induration could not be determined; some glandular enlargement on the left side was present.

There was finally much doubt as to the exact nature of this tonsillar lesion. Was it a primary sore or a secondary manifestation following the sore on the lip? The case was referred to Prof. I. E. Atkinson, of the University, who declared both the sores to be hard chancres. Whether it was also a case of *reinfectio syphilitica* it was impossible to say in the absence of more positive proof of a primary infection of syphilis thirteen years before.

The patient was put upon antisyphilitic treatment and the week following returned with a well-marked roseola and adenopathy, and complained of general malaise, feverishness, loss of appetite, and headache. It was, I think, exactly two weeks later, May 12th, when I saw her again, at which time her hair had begun to fall out and she was suffering considerably with syphilitic arthritis. The tonsil sore had in the mean time healed, leaving a distinct scar, with more or less hypertrophy and hardness of the gland; the labial sore was also much improved.

Under the same treatment the patient has continued to improve, though when last seen there was considerable syphilitic erythema of the palate and both lingual and buccal mucous patches had made their appearance.

Such being the complete history of the case: 1st. The great doubt that the woman had been affected with syphilis in her youth. 2d. The fact that she had been unable to have sexual connection for nearly four months owing to her illness. 3d. The unquestioned exposure and the character of the patient. 4th. The almost simultaneous appearance of the two sores and their physical characters, and finally, the full outbreak of secondary syphilis, would seem to confirm our diagnosis beyond a doubt.

Referring now to the points of interest in this case, the labial chancre needs no comment. The possible reinfectio syphilitica is interesting certainly, but the patient's statement alone as to her first attack is hardly sufficient, and it is unfortunately not now possible to corroborate her statement, the physician who treated her having since died. In view, however, of the interest attached to such reinfection, the following references are given, for in them the subject is thoroughly discussed: Neumann,[1] ———,[2] Arning,[3] Boset,[4] Diday,[5] Rollet,[6] Mallet,[7] Sturgis,[8] Vidal.[9]

When we consider the number of cases reported

[1] Ueber Reinfectio Syph., Wien. Med. Presse, xxv. 1 to 6, 1884.
[2] Reinfectio Syph. in due Conjugi, Lo Sperimentale, xlix., Firenze, 1882.
[3] Ein Fale von Reinfectio Syph. Vrtlgsche. f. Dermat., x. 92, 1883.
[4] Chancre induré devél. deux fois chez le méme individu, Arch. Med. Belges., xxxi., 1863.
[5] Du chancre produit, etc., Gaz. Méd. de Lyon., xi., 1859.
[6] Du chancre produit, etc., Ibid.
[7] Deux cas de Syph. double. montpel. Med., xlvi., 1881.
[8] A Second Infection of Syphilis. Am. Jour. Med. Sc., Phila., vol. 83, 1882.
[9] Monit. des Hôp. de Paris, 1, 1213, 1853.

since 1860, it seems strange that in all French literature there is no case of hard chancre of the tonsil on record previous to this date. As late as 1852 Velpeau declared that this particular lesion seemed impossible, and after him other writers, among them, Vidal de Cassis[1], Martelliere[2] (though the latter admitted the possibility of it), Buzenet,[3] Melchoir Robert,[4] Fournier[5] (in 1856), and Gibert,[6] though they give many hundreds of cases of buccal, make no reference to tonsil chancre.

Fournier (in 1860) was the first to observe and put on record a definite case of chancre of the tonsil, which was one of 77 cases of buccal chancre observed by him. In the following year, Diday[7] reported eight cases and in an elaborate treatise was really the first to give this lesion a definite place in the history of syphilis. Belhomme et Martin,[8] and Rollet[9] described tonsil chancre with cases, while in Desnos,[10] we find a long account of the same and of its complications. Gondouin[11] reports one case; Mauriac[12] and Julien[13] several; the latter describes with great care the initial lesion, its shape, the grayish-white discharge with which it is covered, its regular edges, its slow evolution. We find four cases reported by Hulot;[14] two by Schiragew;[15] four by Boeck;[16] one each by Spillman,[17] A. Hue,[18] Paul Hamonic,[19] Lavallée,[20] Brocq,[21] Merklen,[22] and Thomaschewsky;[23] Taylor[24] reports three from his own practice, one from that of Dr. G. H. Fox, and one from that of Dr. Wigglesworth, of Boston; Knight[25] gives two; Legendre[26] and Pivaudran[27] several of their own observation; and Morell Mackenzie[28] seven.

Such being the history of hard chancres of the tonsil, I shall proceed to give the etiology and physical signs, the functional symptoms and the diagnosis of chancre in this situation. I have not been able to give the exact number of cases reported by each writer, several of the papers referred to being unavailable, and, after all, the exact number is not of particular importance, for it would not enable us to get at the comparative frequency of chancre of the tonsil.

[1] Traité des mal. Vénériennes, Paris, 1853.
[2] De l'Angine Syphilitique. Thése, Paris, 1854.
[3] Des chancres d. l. bouche et d. l. diag. différential. Thése. Paris, 1858.
[4] Mal. Vénérienne, 1861,
[5] In leçons sur le chanchre, par Ricord.
[6] Traité prat. d. mal. d. l. peau et l. syph., 1860.
[7] Comptes rendus Soc. Méd. de Lyon. pp. 45-70, 1861-62.
[8] Traité de path. vénérienne, 1864.
[9] Traité des mal. vénérienne, 1865.
[10] Dict. de méd. et de chirurg. Prat. Vol. ii.
[11] L' Union Médicale, 13 April, 1869.
[12] Leçons sur maladie vén., p. 144.
[13] Traité des mal. vénérienne, 1879.
[14] Ann. de dermat. et syph., 1st. t. x. p. 29.
[15] Petersb. med. Wochen., p. 39, 1880, and Vertljhrch. f. Derm. und Syph., 1881, p. 127.
[16] Tidskrift f. prakt. Med., No. 13, 1883; and Monat. f. prakt. Dermat. 2, p. 317, 1883.
[17] London Med. Record, p. 282, 1879.
[18] La France Méd., vol. i. p. 752, 1883.
[19] Ann. de derm. et syph., Aug. 1882.
[20] Ibid, Jan. 1883. [21] Arch. gén. de Méd., Jan. 1884.
[22] Ann. de derm. et syph., iv., 1880.
[23] Wiener Med. Presse, No. 34, 1884.
[24] N. Y. Med. Journ., May 24, 1884.
[25] Ibid., June 24, 1884.
[26] Arch. gén. de Méd., 1. 292, 1884.
[27] Pivaudran, Thése de Paris, 1884, No. 338.
[28] Dis. of the Throat and Nose, vol. i. p. 200.

Fournier, however, found one in 471 cases of chancre in different localities, and one in 77 of buccal chancre; while Diday in 671 chancres in various situations found not a single one back of the anterior pillar of the fauces. Morell Mackenzie has seen but seven in his great experience.

Theoretically, tonsil chancre should be more common among women than among men, and Morell Mackenzie's experience confirms this idea, for out of the seven cases seen by him, six were in women. Rollet[1] also found chancre of the mouth more common among women, and Ricord, in five years, saw one mouth chancre in 389 men, and two in 199 women. Diday and Desnos find no reason for thinking mouth and tonsil chancre less common in men, but after a careful examination of the separate cases given above, I think we are quite justified in concluding that chancre of the tonsil is more frequent in women than in men.

It is not necessary to describe the cause and mechanism of mediate or immediate contagion; those interested may consult the works of Diday and Desnos referred to above; suffice it to say that kissing is a fruitful source of contagion, when one or the other person is suffering from a manifestation of mouth syphilis, and disgusting practices also which need not be described.

In young children, chancres of the mouth often arise from taking the milk from the breast of a syphilitic woman, and Wigglesworth[2] tells of a medical student who put his mouth to that of an asphyxiated newly born child and inflated the lungs several times. One month later a hard chancre developed on his right tonsil. Knight,[3] too, tells of a lady who contracted a chancre of the tonsil by using the same tooth powder as her nephew, who was suffering from secondary syphilis. Again, the contagion is carried from one person to another by means of instruments, by knives, forks, glasses, and other household utensils used by more than one person; by nursing bottles (see case by Spillman[4]); by cigar stumps;[5] etc.

But of all the non-venereal causes of chancre of the tonsil, one of the most curious methods of infection is through the tube used by glass-blowers. Rollet, in 1858, was the first to call attention to this mode of contagion, having observed the epidemic at Rive-de-Giers. And later, Guinaud[6] published an elaborate paper describing epidemics at various places and giving the exact method of contagion, viz., the passage of the piece of glass as it was being blown into shape from mouth to mouth, of the glass-blowers. At present each workman has his own mouth-piece.

The objective and subjective symptoms of chancre of the tonsil vary so greatly, and its situation is so remote that it often passes unobserved, and when seen is not diagnosed. In this connection Taylor remarks "that there is little doubt that some cases of the *syphilis d'emblée* or *larvée* of the French were really instances of tonsillar infection." Primary chancre of the tonsil, when situated in the *pharynx*,

[1] Dict. Encyclop. 1st série, t. xv. p. 364.
[2] Quoted by Taylor, loc. cit.
[3] Loc. cit.
[4] Ann. de derm. et syph., x., 1880.
[5] Bulkley, Arch. Derm., Phila. 1879, v.
[6] Syphilis des Verriers, Lyons Méd., 1880.

is most always found upon one of the tonsils, owing, no doubt, to the structure of these glands, the lacunæ of which are prone to receive and retain the syphilitic virus. Tonsil chancre is usually unilateral, Rizat,[1] however, saw a young woman who had seven chancres in various places, with one on each tonsil, and Rollet also one with a hard chancre on each tonsil.

Tonsil chancre generally begins with slight redness and swelling, without perceptible induration of the gland. In a few days there is pain on deglutition, an increase in the redness and hypertrophy, soon followed by a superficial erosion with increased induration of its base, and more or less, though constant adenopathy on the affected side. A most important sign is the hypertrophy and general tumefaction of the tonsil gland itself, which would seem to be a constant accompaniment of tonsil chancre. This syphilitic hypertrophy of the tonsil will be found minutely described by Hamonic.

The second important sign is the superficial erosion, increasing to an active ulcerating surface, covered usually with a grayish-white coating, thicker or thinner as the case may be. Again the coating is granular, and somewhat irregularly distributed over the surface of the ulcer. Sometimes, however, the erosion at first is very slight and superficial, as in a case by Diday. On the other hand, the lesion may assume the phagedenic form of a deep, sloughing ulcer, with great tumefaction of the neighboring parts. This last form of ulceration would seem to be a rare complication of tonsil chancre, though cases of such extensive ulceration are reported by Brocq, Mauriac, and Rollet.

The third and most important sign of hard chancre here, as elsewhere, viz., induration of its base, is always present, though not always in the same degree, the amount of induration depending on the amount of hypertrophy of the gland before the development of the chancre. The less the chronic hypertrophy, the less the induration, and vice-versa. Induration of the base may, indeed, be the only sign on which to base a diagnosis of primary infection, as in the case reported by Hue.

The next important sign is the well-marked and early submaxillary adenopathy on the affected side. The engorgement is hard and indolent, and may become very great. Resolution would seem to take place in all cases without suppuration, and the submaxillary adenopathy is much more painful than the inguinal engorgement following genital chancres.

Diday thought the duration of tonsil chancre shorter than that of the primary sore in other places.

The functional symptoms of hard chancre of the tonsil are generally slight, and often an outbreak of roseola is the first intimation the patient has of his trouble. See a case reported by Mauriac.

There is generally, however, pain on deglutition. According to Rollet, among chancres of the mouth, those behind the anterior pillar are the most painful. It is in cases of phagedenic ulceration that the pain is greatest, and swallowing becomes impossible, the breath very fetid and the patient extremely prostrated.

[1] Quoted by Legendre, loc. cit.

Cohen[1] says, "Chancre of the tonsil is usually soft." I hesitate to disagree with so high an authority, but after going over a mass of literature on the subject, I am unable to corroborate the statement.

The diversity in appearance and form of chancre upon the tonsil, the absence of functional symptoms, the very situation of the lesion, and oftentimes the denial of the patient, render the diagnosis of this trouble very uncertain. It is to be differentiated from epithelioma; from psoriasis of the mouth; according to Cohen, from the milky patches of smokers and from tuberculous ulcerations; from mucous patches and the perforating, cone-shaped ulcer of tertiary syphilis; from diphtheria (according to Pivaudran); from gangrenous angina of the throat; and from ulcerating gumma of the tonsil gland.

It would seem that a diagnosis between chancre and epithelioma in a case where there is considerable tonsillar hypertrophy, with an ulcer covered by a granular deposit, and where there is a negative history and the patient old, is by no means easy. An interesting case of this kind is given by Merklen.[2] The patient was a man, æt. 64, who had been suffering for two months with a tumor on the left side in the parotid region.

On examination the left tonsil was found to be greatly hypertrophied, hard, and more or less lobulated; there was an extensive granular ulcer, covering nearly the whole surface of the gland; the neighboring parts were infiltrated and hard; there was considerable pain on deglutition and inability to swallow solids; and finally, there was absolutely no history of past or recent syphilitic infection. A diagnosis of cancer was made. Prof. Verneuil, on further examination, pronounced it a case of primary chancre, and shortly after there followed an outbreak of secondary symptoms, which, with the ulcer in the tonsil, rapidly improved under antisyphilitic treatment.

Cases may arise then, where the diagnosis is difficult, and as it is a point neglected by the author[3] in a paper on epithelioma of the tonsil, he is glad to take this opportunity to give the principal signs and symptoms of these two diseases:

SYPHILIS.	CANCER.
Functional Symptoms.	*Functional Symptoms.*
Deglutition and swallowing painful, but rarely impossible, with freedom from pain when the parts are at rest.	Difficulty and pain in swallowing the first and constant symptom, increasing until it is impossible to take food. Lancinating pain referred to the ear.
Physical Signs.[4]	*Physical Signs.*
Some hypertrophy with early superficial ulceration in primary sore. The tertiary ulcer perforating and cone-shaped. Comparatively slight glandular enlargement, not painful, and subsides with the cause of the irritation.	Great hypertrophy, later widespread ulceration. Considerable glandular enlargement and induration, which become very painful, and do not disappear.
Hemorrhage rare.	Hemorrhage frequent.
Slight emaciation.	Great emaciation.
Amenable to treatment.	Not cured by any treatment.

[1] Diseases of Throat, Phila., 1870, p. 120.
[2] Ann. de dermat. et syph., Paris, 1881, 2 s., ii. 673.
[3] N. Y. Med. Record, March 8, 1885.
[4] Lennox Browne, Trans. Lond. Path. Soc., p. 407, 1879.

Tonsil chancre may, under some circumstances, be taken for a mucous patch, whose favorite seat would seem to be upon the surface of the tonsil; and this is more likely to happen when the patient is seen for the first time, and secondary symptoms have already manifested themselves, and an ulcer still remains upon the tonsil; or when there is hypertrophy of the tonsil, with an active, and by no means superficial, ulceration of the mucous patch. The mucous patch, however, always follows the roseola; and the patch is, as a rule, superficial and of characteristic appearance, etc. To determine finally between a chancre and a mucous patch upon the tonsil Diday says: "Cauterize the ulcer twice at an interval of five days, and, if it is a secondary ulcer, it will disappear; if a primary, hard chancre, it will not."

Pivaudran thinks that primary chancre may be confounded with diphtheria; but the course of the two diseases is so unlike that such a mistake is hardly likely to occur.

In exceptional cases chancre of the tonsil is complicated by an extensive slough. The presence of a grayish ulcer, surrounded by an œdematous circle, with inflammation of the surrounding parts, points strongly to a gangrenous throat affection, either of a syphilitic origin or a primary gangrenous angina, such as is described by Gubler and Trousseau.

The limitation of the ecchymotic spots, and the absence of its propagation to the pharynx, palate, and larynx, and the general course of the affection, with the appearance or non-appearance of secondary eruption, will settle the diagnosis.

Ulcerating, gummy tumor of the tonsil is distinguished from chancre by a deeper ulceration, and by its dug-out edges. According to Legendre, a good differential sign is the existence of an erythema and peripheral engorgement, which are never found in gummy tumors, but always present in throat chancre. Further, a knowledge of the patient's antecedents will be of great value.

Finally, if the lesion upon the tonsil has been of slow, unilateral development, is superficial, with grayish-white deposit; if there is a history, or even suspicion of syphilitic exposure; if there is glandular enlargement; if the sore on the tonsil appeared from fifteen days to three weeks after exposure, and there is absence of chancre elsewhere; if the patient has not been subject to simple tonsillar angina; if the pain is on the affected side, has lasted for some days or weeks, and has not excited febrile reaction, and the whole is followed in due time by an outbreak of secondary symptoms, certainly we are justified in a diagnosis of chancre of the tonsil.

RECENT RESEARCHES ON THE REDUCING SUBSTANCE OF NORMAL URINE.

BY WILLIAM H. GREENE, M.D.,
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THE question whether normal human urine does or does not contain glucose, has been the subject of extended discussion and numerous elaborate investigations, but the results have for the most part intensified the obscurity with which the problem has been surrounded. Careful and trustworthy observers have ably advocated the opinion that small proportions of glucose are constantly present in the urine, and have based their conclusions on the indications afforded by the dextrogyrate property of urinous extracts, by the slight reducing action exercised by nearly all specimens of urine on Fehling's and similar solutions, and by the fermentation under the influence of yeast. All efforts to isolate the glucose in substance have failed, notwithstanding enormous quantities of urine have been subjected to the necessary operations, and it is difficult to understand how appreciable proportions—the normal excretion has been placed as high as one, and even two grammes per day—could disappear during the attempts at extraction.

Experimenters who have not accepted as conclusive, the results furnished by the ordinary tests, have therefore sought, in the presence of an unknown substance, an explanation of reactions so closely simulating those of glucose. With regard to these tests, it may be said that of the substances possibly or probably existing in the urine, glucose is by no means the only one which would rotate the plane of polarized light and which possesses reducing properties; greater weight would attach to the fermentation test, but in addition to the fact that this method has yielded results indicating an exceedingly minute proportion of glucose, it must be considered that the yeast-cells alone are capable of producing a certain quantity of carbonic acid gas, and that this gas is disengaged in small quantity by urine to which no yeast has been added. If, then, it can be shown that normal urine contains constantly another substance which will reduce cupro-alkaline solutions, and which is dextrogyrate, there can remain no ground for assuming the presence of glucose.

In 1875, Von Mering and Musculus[1] found that the ingestion of chloral hydrate was followed by the appearance in the urine of a still then unknown levogyrate acid; this compound, which was named urochloralic acid, was made the subject of elaborate investigation by Külz,[2] in 1881, and again in the subsequent year by Von Mering,[3] who found also that butylchloral hydrate is eliminated in the urine as urobutylchloralic acid. In the meantime Jaffé[4] had in 1878 discovered that orthonitrotoluol is converted in the organism not only into orthonitrobenzoic acid, which would be the oxidation product naturally expected, but principally into an optically active acid that decomposed readily into urea and a new acid which he called uronitrotoluic. The latter can without difficuly be dehydrated by boiling with dilute sulphuric acid; it then loses a molecule of water, and is converted into orthonitrobenzyl alcohol and an acid which Jaffé was unable to isolate. He, however, attributed to it the composition $C_{14}H_{10}O_7$, and considered that it formed with the orthonitrobenzyl radical a conjugate compound resembling a glucoside. Although he could not verify by analysis the composition of this quasihypothetical

[1] Von Mering and Musculus, Berichte der Deutsch. Chem. Gesellschaft, viii. 662.
[2] Külz, Centralblatt für die med. Wissenschaften, 1881, 337.
[3] Von Mering, Zeitschrift für physiologische Chemie, vi. 480.
[4] Jaffé, Zeitschr. für physiolog. Chemie, ii. 47.

acid, he did not hesitate to consider it as the common basis of a group of compounds, including his uronitrotoluic acid, the urochloralic acid of Von Mering and Musculus, the urobutylchloralic acid of Von Mering, and an optically active substance obtained in large quantity by Wiedemann[1] from the urine voided after the administration of camphor. All of these substances are levogyrate; all are capable of reducing cupro-alkaline solutions by the aid of heat, and all are decomposed after the manner of glucosides by boiling with dilute sulphuric acid.

The hypothetical acid of Jaffé was isolated, studied, and analyzed in 1880, by Von Schmiedeberg and Meyer, who found that it possessed indeed the composition indicated by Jaffé, and that camphor is eliminated in the urine as one of its conjugate compounds which can be decomposed by hydration, yielding campherol, and the new acid which they named glycuronic.

The chemical relations between these conjugate compounds, that form part of a numerous class found in the system under similar conditions, and the products of their decomposition by hydration when heated with dilute sulphuric acid, are expressed in the following equations:

$$\underset{\text{Urochloralic acid.}}{C_8H_{11}Cl_3O_7} + H_2O = \underset{\text{Trichlorethyl alcohol.}}{C_2H_3ClO} + \underset{\text{Glycuronic acid.}}{C_6H_{10}O_7}.$$

$$\underset{\text{Urobutylchloralic acid.}}{C_{10}H_{15}Cl_3O_7} + H_2O = \underset{\text{Trichlorobutyl alcohol.}}{C_4H_7Cl_3O} + C_6H_{10}O_7.$$

$$\underset{\text{Uronitrotoluic acid.}}{C_{13}H_{15}NO_9} + H_2O = \underset{\text{Nitrobenzyl alcohol.}}{C_7H_7NO_3} + C_6H_{10}O_7.$$

$$\underset{\text{Camphoglyceronic acid.}}{C_{16}H_{24}O_8} + H_2O = \underset{\text{Campherol.}}{C_{10}H_{16}O_2} + C_6H_{10}O_7.$$

Glycuronic acid reduces Fehling's solution by the aid of heat, and is optically active, but while its conjugate compounds are levogyrate, the free acid is dextrogyrate. Its composition, its properties, and its double function of acid and aldehyde, indicate as exceedingly probable that glycuronic acid is derived directly from glucose. The polarmetric estimation of glucose in diabetic urine frequently reveals a greater dextro-rotation than should be produced by the quantity of glucose present as estimated by cupro-alkaline reduction; at other times a levogyrate action is observed after the glucose has been destroyed by fermentation. These variations would at once become explicable if it could be shown that in the one case the urine contains free glycuronic acid, and in the other a compound of that substance. On the other hand, the existence of notable proportions of glycuronic derivatives in the urine of diabetes mellitus would appear to point clearly to a relation between glycuronic acid and glucose.

Since compounds of such diverse nature as chloroform, chloral, camphor, toluol derivatives, and many others, are eliminated by the urine in conjunction with a common associate, the idea appears at least plausible that this common factor is a constituent of normal urine, and a constant product of normal tissue waste. If this view be correct, then is the reduction of Fehling's solution by normal urine readily understood.

M. Flückiger[1] has reviewed this whole subject with great care, and has recently published the results of a long series of experiments which appear to indicate a great probability that glycuronic acid, or one of its compounds, does exist in normal urine. After finding, in accordance with the statements of other observers, that the reducing power of the urine is equivalent to that of a 0.15 to 0.25 per cent. glucose solution, he has shown that in about one-third of the specimens examined this power was increased by boiling with dilute sulphuric acid, while in the others such treatment produced no changes. By evaporation of the urine to one-tenth of its volume, and dilution of the residue with sufficient water to make up the original volume, five-sixths of the reducing substance is destroyed, or so altered as to lose its reducing powers, when the evaporation is conducted over an open fire or at a temperature of 212° F., and about one-sixth when it is conducted at a temperature of 140°. The reducing substance may be extracted by alcohol from the syrupy residue of concentrated urine, but unfortunately when the alcoholic solution is evaporated and the residue dissolved in water, the reducing power of the solution so obtained cannot be measured, for the reduced cuprous oxide remains in solution. Happier results followed the trial of dialysis; forty-eight hours dialysis of urine reduced to one-fourth its volume, gave an aqueous solution whose reducing power was equal to that of the unaltered urine.

The obtainment in substances of such an unstable compound as glycuronic acid from so dilute a solution as that in which it would exist in the urine, if it exist there, is hardly to be thought of. Flückiger therefore bases his conclusions on the similarities between the reactions of the reducing constituent of urine and those of glycuronic acid. His experiments show that the urine constituent is almost entirely destroyed by evaporation above 194° F., and experiences a partial destruction at 140°; that it is soluble in alcohol but insoluble in ether; that only a small portion of it can be precipitated by barium hydroxide, but that it is precipitable by lead acetate, particularly by the basic acetate; although the greater portion of it is decomposed either by the reaction of the lead solution or by the subsequent treatment of the precipitate; that it is able not only to reduce cupro-alkaline solutions, but to retain in solution the resulting cuprous oxide; that it is dialyzable, and that it yields acetone when oxidized by a mixture of potassium dichromate and sulphuric acid.

The reducing substance of normal urine acts much more slowly on cupric solutions than does glucose; the compounds of glycuronic acid also require a longer interval to effect the reduction. So

[1] Wiedemann, Archiv für experiment. Pathologie, vi. 630.
[2] Schmiedeberg und Meyer, Zeitschr. für physiolog. Chemie, iii. 422.

[1] Flückiger, Zeitschr. physiolog. Chemie, ix. 324.

far as is known, the property of retaining in solution the cuprous oxide reduced from cupric solutions is possessed only by nitrogenized compounds, and this fact would seem to contradict the proposition that the reduction is due to a glycuronic compound; but glycuronic acid is especially apt to form conjugate combinations with such nitrogenized substances as would prevent the precipitation, and it is not improbable that one or more of these combinations may exist in the urine. By the oxidation of glycuronic acid Schmiedeberg and Meyer obtained only formic and carbonic acids, but Flückiger finds that a small quantity of acetone, or at least a volatile liquid responding to the reactions of acetone, is formed at the same time.

As the conclusions to be drawn from these researches, Flückiger proposes the hypothesis "that the reducing substance of normal urine is a conjugate compound of glycuronic acid, which is derived from the glucose of blood, and to the decomposition of which is to be attributed the acetone found in physiological and pathological urine."

He thinks also that the oxybutyric acid recently extracted by Minkowski[1] and Külz[2] from diabetic urine may find its source in glycuronic acid, one molecule of which would yield carbon dioxide, and formic, and oxybutyric acids. He has indeed found that by long boiling with water glycuronic acid yields an acid which is not volatile with vapor of water, but which he has not yet obtained in quantity sufficient for analysis. That acetone may be extracted from diabetic urine was shown by Kaulich[3] in 1860, and in 1870 Lieben[4] found that normal urine contains a substance which responds to the iodine test for acetone; that this substance is actually acetone was clearly demonstrated by Von Jaksch,[5] who in 1883 conducted a series of investigations which resulted in the extraction of acetone in sufficient quantity for identification by its boiling point and by analysis of its compound with sodium acid sulphite. Minkowski has attributed this acetone to the oxidation of his oxybutyric acid; if Flückiger's theory be correct, the oxybutyric acid itself is derived from a glycuronic compound. It is worthy of note that Flückiger has obtained as much as two cubic centimetres of acetone by the oxidation of the residue of thirteen litres of normal urine which were evaporated at a low temperature and from which the urea had been removed.[6]

While the results of this investigation here summarized are not sufficiently positive to exclude the possibility of error, and the conclusions are not, therefore, unquestionable, the laboratory work involved is surrounded by difficulties of no small moment, and though the solution of the problem may not be final, the direction of further research seems clearly indicated.

[1] Minkowski, Archiv für experiment. Pathologie, xviii. 4.
[2] Külz, Zeitschrift für Biologie, 1884, 165.
[3] Kaulich, Prager Vierteljahrsschrift für prakt. Heilkunde, xvii. 38.
[4] Lieben, Annalen der Chem. und Pharm., vii. sten Supplemetsband, 218.
[5] R. Von Jaksch, Zeit. für physiolog. Chemie, vi. 541.
[6] Flückiger. Zeitschr. für physiolog. Chemie, ix. 353.

A CASE OF SIMPLE ENDOCARDITIS LIMITED TO THE RIGHT HEART.

Reported by RADCLIFFE CHESTON, M.D.,
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By permission of Dr. F. P. Henry, the physician in charge, I report the following case of simple endocarditis limited to the right heart, occurring in the wards of the Episcopal Hospital, as interesting, owing to the rarity of its primary occurrence during adult life:

Eliza H., æt. 60, single, born in England, was admitted to the ward on March 27, 1885, with left-sided hemiplegia, from which she had been suffering for five weeks. The attack came on suddenly during the night. She was awakened by the pain and intense itching in left arm and leg, and on attempting to move she fell out of bed, and was picked up completely paralyzed on left side. The muscles of the face were paralyzed on the right side, and she had no control over bladder or rectum. Her family history was good; she had never had rheumatism or syphilis. As far as I could ascertain, she had always been a healthy woman up to the time of her present trouble, excepting slight paroxysms of præcordial pain, for a month before the present attack.

On admission, she was found to be very much emaciated; had complete paralysis of left side; no anæsthesia; left arm and leg slightly œdematous. Intelligence very good; sight good; pupils small, equal, and responsive; could not sleep; no control over bladder or rectum. Heart was feeble and accelerated, with a soft, systolic murmur, heard best at ensiform cartilage. She gained control over the bladder and rectum, for a short time, under treatment with the syrup of the hypophosphites, strychnia, etc., but gradually lost ground, and died with a feeble, rapid heart and great dyspnœa, on the 7th of May.

Autopsy.—Brain very soft; vessels full; those at base of brain very hard and patulous, showing atheroma of their walls. The dura mater was inflamed and adherent to the brain, with patches of lymph along the longitudinal fissure; the other coverings of the brain were also inflamed. In the cortical substance of the third ascending frontal convolution, close to the longitudinal fissure, was found a clot the size of an English walnut, undergoing softening. There was very little effusion into the ventricles. The heart was found to be about the normal size, covered with fat, and its walls of natural thickness. The aorta was dilated and decidedly atheromatous. The coronary arteries were enlarged, showing also atheromatous change. The left heart showed no pathological change, both the aortic and mitral valves were perfectly competent by the hydrostatic test, and of normal texture, as were also the pulmonary valves; but the tricuspid valve was found to be incompetent; the two posterior cusps were bound down to the walls of the heart by a fibrinous exudation, with a small fibrinous clot between one of the cusps and the heart-wall. Along the margins, on the auricular surface of the cusps, were minute rose-colored vegetations, while the cusps themselves were considerably thickened back to their base. In the right auricle, on the

right posterior wall, was found a fibrinous clot, one inch and a half long, one inch wide, and a third of an inch thick, firmly bound to the wall of the auricle so tightly that when it was detached almost the whole muscular and serous layers came with it.

Unfortunately, the other organs were not examined, as the heart was taken out in reference to the brain lesion, and was not examined until the body was closed up.

In conclusion, I would like to draw attention to a few special points of interest, viz.:

1st. The limitation of the endocarditis to the right heart after fœtal life, an extremely rare occurrence.

2d. To the binding down of the cusps of the valve to the heart wall, which is mentioned in Dr. Byron Bramwell's work on *Diseases of the Heart*, as very exceptional in simple endocarditis.

3d. To the fibrinous clot, bound so firmly to the wall of the right auricle.

MEDICAL PROGRESS.

THE TREATMENT OF HERPES OF THE CORNEA.—M. GALEZOWSKI (*Recueil d' Ophthalmologie*, March, 1885) considers febrile herpes of the cornea to be a disease of frequent occurrence in cold and moist seasons. It is characterized by intense photophobia, lacrymation, and perikeratic redness. The margin of the cornea presents fine ulcerations, as though portions of the membrane had been eroded with the point of a pin. As a rule, they do not penetrate deeper than the layer of Bowman, and they are arranged in a radial manner from the centre towards the circumference along one or more radii. A remarkable feature of the disease is that the cornea is perfectly insensitive. Throughout the whole extent of the herpetic eruption the cornea may be rubbed or pressed with a probe or needle without the least pain being experienced. The other parts of the cornea, however, preserve their normal sensibility. The total anæsthesia of the cornea in the affected portion distinguishes the disease from phlyctenulæ of the cornea, and from abscess of this membrane. The treatment of the disease consists in the employment of the compressive bandage, especially combined with moist heat in the form of spray and boric acid. This acid, he believes, destroys the microbes which accumulate in corneal ulcers and facilitates the process of cicatrization by acting as an astringent. He prescribes it in three forms. (1) In a 2 per cent. solution, either as a lotion, or a douche, or a spray. (2) In the form of an ointment containing one grain of the acid to forty of vaseline, introduced between the lids two or three times daily. (3) In the form of a fine powder, which should be applied to the surface of the cornea with a camel-hair brush. He exchanges the boric acid for atropine or pilocarpine once or twice a day. Internally quinine may be administered with advantage.—*The Practitioner*, July, 1885.

THE RESULTS OF THE USE OF ANTIPYRINE AT THE BOSTON CITY HOSPITAL.—DR. GEORGE B. SHATTUCK in *The Boston Medical and Surgical Journal*, of July 23, 1885, recounting the results of the use of antipyrine at the Boston City Hospital, says: Antipyrine was administered in several cases of intermittent, without interrupting the chills and without appreciable effect. This failure was anticipated from our previous experiences with kairine. A few instances are reported from Germany, in which the periodicity of the attacks was broken temporarily by large doses; but such instances are exceptional, and no antiperiodic action has been claimed or can be allowed. All these coal-tar derivatives resemble quinine in their antipyretic action, but differ from it in lacking the specific antiperiodic action upon malarial conditions.

The fall in temperature ordinarily begins to declare itself in about an hour after giving antipyrine, reaching its maximum in from three to five hours after the full dose of six grammes, divided in the German fashion, continuing on an average about eight hours, though sometimes lasting twice as long. A fall of from 3° to 5° F. is very easily secured. The change in the pulse is by no means always proportioned to that in the temperature. The urine is somewhat diminished, free from albumen, and but little altered in color—in the last respect offering a contrast to urine after kairine.

We have had no experience with antipyrine in children. Two German observers who used it largely in a children's clinic report that it is well borne by them, and suggest one decigramme for each year of age as a rule for the dose to be given.

As a general result of our experience at the City Hospital, where further trials are still being made, I am able to endorse antipyrine as: (*a*) An efficient and reasonably safe antipyretic, without antiperiodic qualities.

(*b*) Whose exhibition in proper doses is, as a rule, unattended by serious discomforts or drawbacks.

(*c*) By reducing a high temperature it frequently substitutes calm for excitement, and sleep for restlessness.

(*d*) Otherwise it does not usually modify the course of disease, and certainly not of typhoid fever.

(*e*) The quality of the sample used must be carefully watched in these synthetical compounds. A poor article will produce vomiting, chills, and collapse, when a good one will not; or, on the other hand, may be inefficient when the pure drug would have proved effective.

Antipyrine may be employed in a variety of febrile conditions, though its desirability in phthisis is questioned; but typhoid fever is the disease in which it is likely to be most largely and frequently used. When used in typhoid it should be distinctly without expectation of modifying the course of the disease. To emphasize our own experience on this point, I may quote that of Alexander, who reports a severe relapse in typhoid after the administration of fifty-four grammes of antipyrine in divided doses throughout the first attack; and of Dr. William H. Draper, in whose service at the New York Hospital, of five patients *dying* from typhoid fever, one took ten grammes in ten doses during five days; a second twenty-seven grammes in seven doses during six days; a third thirty-four grammes in twenty-one doses during eight days; a fourth forty-eight grammes in ten doses during seven days; a fifth three hundred and twenty-one grammes in sixty-five doses during thirty days.

THE NUTRITION OF THE NERVOUS SYSTEM.—DR. MAIRET, at the close of a critical article upon the nutrition of the nervous system, says the relations which

exist between phosphoric acid and the nervous system are:

1. Phosphoric acid is intimately related with the nutrition and functional power of the brain. The brain in action takes up phosphoric acid in combination with the alkalies, and forms phosphoric acid in composition with the earths.

2. Intellectual exertion reacts upon general nutrition and modifies it.

3. Intellectual exertion modifies the elimination of phosphoric acid by the urine, and diminishes the percentage of phosphoric acid in composition with the alkalies and increases the percentage in combination with the earths.—*Archives de Neurologie*, July, 1885.

EXPERIMENTS UPON ENGRAFTED BONE.—DR. AMBROGIO FERRARI, after a long series of experiments upon the phenomena attending the engrafting of bone, reaches the following conclusions:

1. Pieces of bone engrafted into the shaft of a long bone become completely united and continue to live.

2. They not only continue to live, but also grow.

3. That such results follow without reference to the position in which the engrafted bone is placed.

4. The reunion of grafts occurs by a true vascularization which takes place between the engrafted bone and that into which it is introduced.

5. That a bony callus, periosteum, and medulla are formed in relation with the engrafted bone.

6. That, as in fracture, this callus possesses a temporary vitality.

7. That after a certain time the callus, periosteum, and medulla are absorbed, and the engrafted bone is nourished only by a greater vascularization.

8. That grafting occurs more completely if the inserted bone is in exact adaptation with the margins of the bone receiving it. While this observation is not verified, in a case where the opposite condition existed, a longer time was necessary for union to take place.

9. The most complete and careful antisepsis is required in order that complete union of the engrafted bone may occur.

10. The engrafting of several pieces of bone succeeds completely.

11. That in case of engrafting of several pieces of bone with partial suppuration, union of some of the pieces may take place provided suppuration does not extend to that portion of the engrafted bone in communication with the medulla.

12. Besides antiseptic precautions compression is required to maintain contact between the medulla and the pieces of bone engrafted in order to obtain a successful result.—*Gazzetta degli Ospitali*, July 22, 1885.

PSEUDO-SYPHILITIC PARALYSIS.—M. FERDINAND DREYFOUS distinguishes the following clinical forms of pseudo-syphilitic paralysis.

1. Cases in which syphilitic infection is known to exist and in which paralysis appears with slight syphilitic manifestation. The lesion in these instances can scarcely be mistaken, and even when osseous manifestations are ignored the relation between syphilis and the paralysis may be suspected. Thus Bednar and Henoch saw what they considered syphilitic paralysis in children, and referred them to the diathesis. Paralysis here appears as a manifestation of syphilis —*i. e.*, as a specific paralysis.

2. Cases in which the disease seems to have a traumatic origin. Fracture, displacement, or subluxation being only seen, the rôle of syphilis in the production of the disease may be overlooked. In such cases the paralysis appears as the result of traumatism, and, therefore, as a surgical affection.

3. Cases in which syphilis is ignored, no sign of the disease being manifested, and no other lesion being discoverable in any organ save the paralyzed member.

Accordingly, only infantile paralysis is suspected. In such cases the disease is presented as a simple paralytic affection, and its syphilitic origin must be traced.—*Revue de Médecine*, July, 1885.

OBLITERATION OF ONE LUNG AND DISPLACEMENT OF THE HEART.—At the closing meeting of the Islington Medical Society, on the 26th ult., DR. GLOVER gave the particulars and showed the specimens of two very striking lesions in the case of a man, aged sixty-three, whom he had known for several years as a dispensary patient and otherwise. The most noticeable peculiarity was the complete displacement of the heart. It occupied the right side, and beat between the fourth and fifth ribs. This fact had been observed thirty-five years ago by Mr. Jackson, one of the oldest members of the Society, and the patient had been examined by many physicians, amongst others by Dr. Austin Flint, who came to the conclusion that there was no transposition of organs—a conclusion verified by the post-mortem. But the autopsy revealed another lesion, which was as remarkable as the malposition of the heart. This was the almost complete absence of the right lung. It had to be long sought for ere it could be found, and was then discovered as a very hard shrivelled substance, in shape something like a sausage. On being cut into, it was found to consist almost entirely of thickened pleura, the pleura being at points half an inch thick. The lung substance was nearly destroyed, not with intersecting bands of fibrous tissue, but by this envelope of thick pleura. The left lung was correspondingly large. No history of pleurisy could be traced in the patient's life, and no history of consumption in that of his family. He had always been weak and slight. His mother always had noticed "a beating on the wrong side." He used to have severe bleedings at the nose. His chief troubles had been cough and rheumatism. He died in the Islington Workhouse of broncho-pneumonia. It is common to say that a person has lost a lung, but here the statement was a literal expression of the fact, though the patient contrived to live without it, and with his heart on the wrong side, for sixty-three years.—*Practitioner*, July, 1885.

THE INCOMPATIBILITY OF CHLORAL HYDRATE IN THE PRESENCE OF POTASSIUM BROMIDE AND ALCOHOL.—PROF. GEORGE F. H. MARKOE, in experimenting with solutions of chloral hydrate finds this drug incompatible with bromide of potash and alcohol. He says: Experiments prove that the alcohol is the cause of the trouble, and the writer thinks that the chloral hydrate is changed into the less soluble chloral alcoholate.

The writer found that the addition of potassium bromide, sodium bromide, sodium chloride, and magne-

sium sulphate to strong solutions of chloral hydrate, together with the presence of alcohol, determined a separation of the liquids into two layers. Ammonium chloride, ammonium bromide, potassium nitrate, and calcium bromide did not disturb the same chloral solutions.

The practical lesson to be learned from this incompatible prescription is that alcoholic preparations should not be prescribed with chloral hydrate, especially not in connection with the bromides of potassium and sodium, because if concentrated solutions are used the chloral will separate as alcoholate, float on the surface, and a great risk will be incurred of giving a large overdose, the patient having received no caution with regard to the necessity of shaking the contents of the bottle before taking a dose.—*Boston Medical and Surgical Journal*, July 23, 1885.

APHASIA AND ITS DIVERSE FORMS.—M. BERNARD, in a thesis upon aphasia and its diverse forms, recognizes the special features of the affection under the following heads:

1. Aphasia is the amnesia of signs.

2. The complex and varied conditions embraced under the term aphasia have been observed long since. Up to the investigations of Bouillaud, no synthetic study of the affection had been made. Broca first analyzed and definitely fixed the symptoms and anatomical localization of one of the forms of aphasia, *i. e.*, of aphemia, or abolition of the power of articulate speech.

3. By rigorous application of the anatomo-clinical methods, Charcot established also the existence and independence of other forms of aphasia-agraphia hitherto contested, verbal deafness, verbal blindness—forms distinguished by Marcé, Wernicke, and Kussmaul.

4. Words, as are the generality of signs, are not units, but composites of at least four elements. They must be *heard* and *articulated*, *read*, and *fixed by writing*. Aphasia may depend on one or more of these elements, whence are derived the four principal forms of aphasia.

5. Blindness of words is amnesia of the signs and figures of written speech in particular. The patient sees the signs, but cannot interpret them. The left inferior parietal lobule of the brain is constantly involved in the case of verbal blindness. Hemiopia to the present time has always accompanied it.

6. Verbal deafness is the inability to comprehend a spoken word, or, indeed, all language heard. It depends upon a lesion of the first left temporo-sphenoidal convolution.

7. Aphemia, or loss of memory of the coördinated movements necessary for the articulation of speech, depends upon a lesion at the base of the third left frontal convolution, and is frequently accompanied by right-sided hemiplegia.

8. Agraphia is the abolition of the coördinated movements necessary for writing. Its anatomical location is probably the bottom of the second left frontal convolution.

9. In the left-handed the right hemisphere is the seat of the lesions upon which aphasia depends.

10. All representation of ideas and all speech may be affected.

11. The independence and relevancy of each variety of aphasia cannot be estimated in those cases in which they coexist in the same patient, inasmuch as in such conditions the different forms of expression are very unequally affected.

12. Symptoms of aphasia are extremely variable from time to time, even in the same patient, a fact which imposes upon the physician, and especially upon the legal physician, the necessity of frequent examination.

13. No formula can be given as to either the moral capacity or the intellectual strength of the aphasic.

14. Whatever may be the form, the progress, and the cause of aphasia, prognosis must always be made with much reservation.—*Revue Médicale*, June 6, 1885.

TREATMENT OF TUBERCULOSIS.—POTAIN recommends the annexed prescription as a remedy in tuberculosis:

℞.—Sodii chloridi	. . . .	ʒijss.
Sodii bromidi	. . . .	gr. lxxv.
Potassii iodidi	. . . .	gr. xv.
Aquæ dest.	. . . .	fʒiij.—M.

S.—Dessertspoonful every morning in a cup of milk.—*Revue de Thérapeutique*, July 15, 1885.

OINTMENT FOR THE TREATMENT OF ITCH.—KAPOSI recommends the following ointment in the treatment of itch.

℞.—Naphthol	. . . . .	ʒiv.
Saponis vird.	. . . . .	ʒiss.
Cretæ præcip.	. . . . .	ʒiiss.
Adipis	. . . . .	ʒiij.—M.

Apply thoroughly with friction to the regions affected and powder with starch. The ointment has no disagreeable odor and does not stain the garments. It, however, causes cutaneous inflammation under the form of red spots, urticaria or disseminated papules of eczema, which are not severe. For nursing and young children the naphthol should be diminished to the proportion of 5 to 100.—*L'Union Médicale*, July 25, 1885.

SEA BATHS AS A CAUSE OF EAR DISEASE.—F. BOBONE, in a research into the causation of ear disease by sea baths, gives the following résumé of his conclusions:

1. Sea baths are sometimes the cause of serious disease of the ear.

2. The disease is usually occasioned by the entrance of water into the external auditory meatus, and is found in those persons who dive or plunge under water.

3. Among the affections so caused, external otitis and tympanitis predominate.

4. Purulent otitis of the middle ear is also frequently met with as a result of sea baths, but frequently is secondary to the tympanitis.

5. Purulent otitis of the middle ear as a result of entrance of water into the tympanum through the Eustachian tubes, is of extreme rarity.

6. Diving and plunging under water is useless and dangerous and the practice should be deprecated to bathers, especially to those whose ears are already diseased.

7. Syringing the external auditory canal with sea water, a procedure still recommended by some practitioners is irrational and far more productive of evil than of good.

8. A pledget of cotton in either ear previous to entering the water will prevent much of the danger to hearing resulting from the entrance of sea water into the auditory apparatus.—*Gazzetta degli Ospitali*, July 19, 1885.

NEUROSES OF THE STOMACH.—DR. OSER, in the *Wiener Medizinische Blätter*, divides neuroses of the stomach into two classes.

1. Those dependent on a diminution of the power of motion.

2. Those which are dependent on an increase of this power.

He notes in the first group:

1. Rumination, which results probably from a paralysis of the cardia. Light forms may be cured by nutriment without fluids, dorsal decubitus after meals, or by faradization of the cardia. Grave forms terminate fatally.

2. Insufficiency of the pylorus. In this condition he advises the distention of the stomach by carbonic gas.

3. Gastroplegia, or insufficient muscular action of the stomach.

In the second group he places.

1. Cramp of the cardia, which may be diagnosticated by the œsophageal sound.

2. Cramp of the pylorus, which is due to a reflex caused by pressure.

3. General gastric cramp.

4. Peristaltic derangements, frequent in hysteria and neurasthenia.

5. Nervous vomiting.—*L'Abeille Médicale*, July 6, 1885.

THE PHYSIOLOGICAL ACTION OF CHINOLINE TARTRATE.—DR. CONRAD BERENS, in *The Therapeutic Gazette*, of July 15, 1885, in an exhaustive experimental study of the physiological action of chinoline tartrate, reaches the following conclusions:

1. Chinoline tartrate is a powerful agent, producing death by asphyxia.

2. The drug increases the force and frequency of the respirations by stimulating the vagus roots in the lung.

3. It paralyzes respiration finally by a secondary depressant action upon the respiratory centre.

4. It does not cause convulsions.

5. It lessens, and finally abolishes, reflex action by a direct action upon the cord, and by a slight action upon the muscles and nerves.

6. It diminishes or abolishes muscular contractility respectively when applied through the circulation or directly.

7. It coagulates myosin and albumen.

8. It causes insalivation by paralysis of the secretory fibres of the chorda tympani; increases the flow of bile; has no action upon the spleen.

9. It lowers blood-pressure by paralyzing the vasomotor centres, and by a direct depressant action upon the heart-muscle.

10. It diminishes the pulse-rate by direct action upon the heart.

11. It lowers the temperature by increasing the loss of heat.

12. It is a powerful antiseptic; and, finally,

13. Its paths of elimination are not known.

OINTMENT IN ULCER OF THE CORNEA.—GALEZOWSKI recommends an ointment as follows in the treatment of ulcerated cornea:

℞.—Iodoformi pulverati . gr. xv–xxx
Vaselini puri, . . ʒiiss.—Mix carefully.

The ointment is useful in herpetic and scrofulous ulcers of the cornea. It acts also favorably in ulcers appearing in syphilitic subjects. It may be used several times during the day. In addition, a collyrium of pilocarpin and douches of carbolized spray are also beneficial, used fifteen or twenty days. The ulcer is filled up by new tissue, and cicatrization gradually progresses. —*L'Union Médicale*, July 9, 1885.

SYPHILITIC AFFECTIONS OF THE LARYNX; THEIR FORM AND FREQUENCY.—G. LEWIN, in *Archivi di Laringologie*, Napoli, 1885, enumerates the syphilitic lesions of the larynx as follows:

1. *Erythema*, characterized by a tendency to superficial exfoliation. Catarrh of the larynx exists only in cases complicated by other diseases.

2. *Mucous patches* (little marked, however) are observed upon the vocal cords, in those parts supplied with papillæ. Their ulceration cannot be affirmed with certainty.

3. *Perichondritis*, not always a result of transmission from the tissues overlying the cartilages, inasmuch as the perichondrium may be primarily affected.

4. *Œdema of the larynx*, in general secondary in syphilitics, and is due to other morbid causes than are associated with specific laryngitis.

5. *Laryngeal syphilis* is relatively rare when syphilis is subjected to rational treatment.

The prognosis of all affections of the larynx, except cicatricial stenosis, is very favorable when treated by subcutaneous injections according to the method originated by the author.—*Lo Sperimentale*, June, 1885.

THE EMPLOYMENT OF WOOD CHARPIE AND WADDING IN THE DRESSING OF WOUNDS, AND AN ANTISEPTIC POWDER REPLACING IODOFORM.—At a recent meeting of the Paris Surgical Society, M. CHAMPIONNIÈRE criticised the antiseptic gauze generally employed in the Listerian dressing of wounds, as being almost impermeable to fluids, and as retaining its antiseptic qualities for a limited time only. He also held that it is poorly prepared, and irritates the skin.

M. Championnière further announced that for four months he had used in nearly all his more important operations a new substance, invented in Germany—*wood lint*. This is a preparation of the wood of the fir tree, resembling a paste of paper, and impregnated with a solution of corrosive sublimate of 1 to 4000 in strength. When combined with wadding in a proportion of one-fifth, it receives the name of wood wadding.

The substance is soft to the touch, easily compressed, and capable of readily absorbing large quantities of fluid, so that when placed in contact with a wound, the discharges therefrom do not appear or escape from the dressing.

The amount of corrosive sublimate contained in the dressing is relatively large, and when infiltrated into the discharges of the wound readily prevents putrefaction. Owing to these qualities, it is possible to allow a dressing to remain a much longer time than ordinarily is possible, without removing it.

M. Championnière further remarked that the dressing under consideration sometimes fissures, and that thus, if employed alone, septic infection may thereby result. To obviate this, the wound is directly sprinkled with the following powder: Iodoform, sifted; powdered Peruvian bark; powdered benzoin; and powder of magnesia, saturated with some eucalyptus. This preparation is superior to simple iodoform, both on account of its lack of disagreeable odor and greater cheapness.—*L'Union Médicale*, July 7, 1885.

TREATMENT OF ANÆMIC NEURASTHENIA.—MAXIMOWITCH recommends the following for the treatment of neurasthenia due to anæmia:

℞.—Ferri bromidi,
Quiniæ hydrobrom. . . . āā ʒj.
Ext. rhei . . . . . q. s.—M.
S.—Ft. pil. cxx.

Dose: Two pills three times daily.—*Revue de Thérapeutique*, July 15, 1885.

THE DIAGNOSIS OF APPARENT DEATH.—M. BUSH, in the *Centralbl. f. Nervenheilkunde*, 1884, suggests the application of the faradic current to different parts of the body, in order to excite contraction of the muscles. If the attempt is successful, a surface thermometer, or an ordinary thermometer with proper precautions, is placed and retained upon the skin for from three to five minutes, while contraction of the subjacent muscles is maintained. If the temperature rises, the person is alive.

A second method suggested is the following: In normal conditions, violent mechanical excitation, as pinching of the skin, determines a rise of temperature in an extensive circuit by vascular reflex dilatation, and the same phenomenon is observed after application of snow or ice. Nothing similar occurs in a corpse. The author has not, however, had opportunity to test the correctness of his theory upon any case of apparent death.—*Archives de Neurologie*, July, 1885.

CONTRIBUTION TO THE STUDY OF ANTISEPTICS.—At a meeting of the Académie des Sciences, held July 20, 1885, MM. A. MAIRET, PILATTE, and COMBEMALE made a report on the effect of carbolic acid and resorcine upon the higher forms of life. The phenomena observed from the action of resorcine are similar to those produced by carbolic acid, differing only in the following points:

1. Resorcine is more toxic. When injected in a strength greater than one and a half grains to every two and a half pounds, by weight, of the animal experimented upon, death ensues.

2. The saliva, which is very abundant, and the expired air, do not contain resorcine.

3. After the injection of resorcine the temperature falls a little more than under the influence of carbolic acid; sensibility is more blunted, and weakness is considerable.

4. Autopsy shows congestion and inflammation on the part of the spleen, pancreas, and mesentery, which have not been observed in experiments with carbolic acid.—*Gazette Hebdomadaire de Méd. et de Chirurg.*, July 24, 1885.

PROGRESSIVE TABETIC PARALYSIS.—DR. EMILE DEMANGE gives the following résumé of his study of progressive tabetic contracture:

1. There are reasons for describing a special form of tabes with contracture, distinct from spasmodic tabes, and from amyotrophic lateral sclerosis, but with which it offers numerous points of resemblance.

2. This form has been observed in extreme old age—after sixty-six years.

3. It depends for its origin upon a general atheromatous condition of the spinal bloodvessels.

4. Anatomically it is characterized by a diffuse interstitial sclerosis of vascular origin, in different portions of the spinal marrow, but more especially in the lateral cords, without, however, remaining limited to this system alone.

5. Clinically, it holds a middle place between spasmodic tabes and lateral amyotrophic sclerosis.

6. This form of disease we designate by the title of *progressive tabetic contracture of the atheromatous.*—*Revue de Médecine*, July, 1885.

EXPERIMENTAL STUDY UPON THE POSITION IN THE BLADDER OF OBLONG FOREIGN BODIES.—DR. HENRIET, after a series of experiments to determine the position of oblong foreign bodies in the bladder, recites the following conclusions:

1. Oblong foreign bodies when introduced into the bladder tend generally to assume a transverse position. This tendency is explained by the constancy of the transverse diameter of the viscus.

2. However, when the bladder is distended, the foreign body may take various positions, in every direction, uncertain and variable with the movements of the viscus, and not at all to be foretold.

3. When the length of the foreign body exceeds three or four inches, and it is sufficiently resistant to be unable to accommodate itself to all positions, it can only be received in a bladder more or less filled, and will lie in either the vertical or oblique diameter.

4. When foreign bodies are of moderate size and capable of being accommodated in any diameter, they may float in the viscus when it is full of urine, if their specific gravity permits. But hollow bodies, such as the ends of catheters, etc., become filled with fluid and always occupy the bottom of the organ.—*Annales des Maladies des Organes Génito-Urinaires*, July, 1885.

SURGICAL INTERVENTION IN DISLOCATION OF THE CRYSTALLINE LENS.—DR. DEHENNE, in a communication read at the Société de Paris, June 13, 1885, gave the following résumé of the conditions justifying surgical interference in dislocation of the crystalline lens:

1. Extraction of a luxated crystalline lens should only be attempted when the luxation is in front of the iris.

2. In every luxation posterior to the iris, no effort should be made at extraction.

3. If the patient suffers no pain, no interference with the condition should be made at all.

4. If there are symptoms of glaucoma exhibited, two cases are to be distinguished:

a. All perception of light is lost. Enucleation is necessary.

b. The media and the deep membranes are intact. It is necessary in the first place to practise a *sclerotomy*.

If accidents recur, remove the lens from the region dangerous to the eye, and, as a last resort, perform enucleation.—*L' Union Médicale*, July 5, 1885.

TREATMENT OF PERSISTENT METRORRHAGIA.—

℞.—Ergotine (Bonjean's) . . gr. xlv.
Rutæ pulv.
Savinæ pulv. . . . āā gr. xxij.—M.
S.—Ft. pil. No. xxx.

Take two pills daily, and increase to four.—*Revue de Thérapeutique*, July 15, 1885.

OSMIC ACID INJECTIONS IN TRIGEMINAL NEURALGIA.—DR. SCHAPIRO, in a recent lecture before the St. Petersburg Medical Society, gave an account of the chemical and therapeutical history of osmic acid, commencing with the discovery of the metal osmium in 1804 by the English chemist, Smithson Tennant, and concluding with his own observations made during the latter half of 1884, in the ambulance of the Imperial Philanthropic Society, when he employed injections of osmic acid in eight cases of trigeminal neuralgia, all of them severe, very obstinate, and of long standing. Of these cases five were cured, two improved, and one derived no benefit from the treatment. The formula used by him was—℞ Acidi osmici, 0.1; aquæ dest., 6.0; glycerini chemice puri, 4.0. This he found kept well for two or three weeks; while the simple watery solution began to become brown in three or four days, and afterwards turned black, and was then useless. As one gramme costs four roubles (eight shillings), being thus four times as dear as gold, it is of considerable importance to make use of a solution which will keep. The writer also found no dark specks in his solution such as are to be met with in that used by Neuber. The dose injected was at first five drops, afterwards more, the medium dose being eight drops. The only time when any unpleasant symptom occurred was in the case of a highly nervous lady who had been subject to epilepsy, and in whom the injection induced an attack of faintness very similar, in Dr. Schapiro's opinion, to the *petit mal*, and he suggests that with nervous patients the possibility of the occurrence of faintness should be borne in mind. The only case in which no improvement followed the treatment was that of a lady whose case was diagnosed by Professor Erb as hysterical neuralgia, and who suffered from severe pain in the neck and back of the head, and was believed to have some central lesion. In her case a single injection was followed by increased pain, and she refused to allow any more injections to be attempted. Dr. Schapiro, not having observed any evil local effects such as were described by Lichenstein (sanguineous bullæ, scabs, tedious boils), does not hesitate to inject under the skin of the face. He does not at present go deeply into the theory of the action of osmic acid, though he intends to study this experimentally; but he remarks that its most important action is to cause inflammation of the terminal nerve branches, it narcotic effect being of a secondary nature only.—*The Lancet*, August 1, 1885.

PUERPERAL CONVULSIONS WITHOUT ALBUMINURIA.—DR. N. VUCCINO, of Rodosto, writing in the Constantinople *Gazette Médicale d' Orient*, gives the case of a lady usually enjoying excellent health, except for occasional hysterical attacks, who in the fourth month of her first pregnancy was seized with a severe frontal hemicrania of quotidian type. At the end of the sixth month she was awakened one night with intense pain in the head, followed by a slight convulsion affecting the upper extremities. In the morning the writer found her suffering from general convulsions, consciousness being lost, and a bloody froth issuing from the mouth; the pulse was small and hard; but the urine was then, and continued to be, perfectly normal. Various methods of treatment having proved fruitless, it was decided to bring on the labor, which was done by injecting hot water (32°). After this had been continued for three hours and a half, the os uteri became fully dilated, and a dead child was shortly afterwards expelled. The convulsions ceased as if by magic, and in twelve days she was able to resume her household occupations. She afterwards enjoyed good health till the eighth month of her second pregnancy, when convulsions reappeared with greater intensity than before. Chloral and chloroform proving inefficacious, the continual hot vaginal douche was again employed. In consequence of the irregularity of the contractions of the uterus forceps were required. The convulsions ceased five hours after delivery, and in seventeen days she was again in her normal condition. She subsequently became pregnant for the third time, and during the second month suffered from some premonitory convulsive symptoms, which were increased by vaginal examination; these came to an end on the patient aborting. The author considers the case interesting, as showing how convulsions, due, as he believes, to a highly nervous condition of the uterus, may simulate those connected with renal and urinary mischief.—*The Lancet*, July 18, 1885.

THE USE OF HOMATROPINE AS A SUBSTITUTE FOR ATROPINE IN ESTIMATING LESIONS OF REFRACTION OF THE EYE.—MESSRS. W. LANG and J. W. BARRETT, after a careful clinical study of the use of homatropine as a substitute for atropine in ascertaining lesions of refraction, conclude:

1. That in the majority of cases where it is required to estimate the refractive condition of the eye atropine need not be used, but that a 2 per cent. homatropine ointment or solution applied in the manner indicated will answer equally well.

2. That the effect will pass off in from one to two days, but that if the patient be hypermetropic or emmetropic, and is desirous of avoiding the period of paresis of accommodation,

3. One or two applications of 0.8 per cent. solution of eserine just after the examination is finished will give him fair near vision until the effect of the homatropine is beginning to pass off.—*Medical Times*, July 18, 1885.

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SATURDAY, AUGUST 15, 1885.

THE INTERNATIONAL MEDICAL CONGRESS.

WE invite careful attention to a letter appearing in another column, which has been received from Sir James Paget, who, as the immediate predecessor of the lamented Panum in the Presidency of the Congress, and as a member of the existing Executive Committee, speaks in reference to the organization of the next Congress with the highest authority. This letter commends itself to the thoughtful consideration of every physician who has the true interest of the American profession at heart, and it will give light to some who desired more authoritative information than they have yet possessed to guide correctly their future course of action.

It has been asserted by the editors of one or two medical journals that the Executive Committee of the last International Medical Congress no longer exists, that therefore the Congress must meet next in this country, and hence, that the American Medical Association plan must be adopted and supported. We have now information from members of the Executive Committee of the Copenhagen Congress, that that Committee is considered to be still in existence, that it still has work to do, and that it will by no means hesitate to assume the responsibility of ordering that the Congress shall meet in Europe instead of this country in 1887, in case it considers that such change of place of meeting would be for the interests of the Congress. And if it does issue such a notice there can be no doubt that it will be obeyed.

Of this Committee Sir James Paget is one of the most prominent and influential members, and hence his opinion demands the most serious consideration. This opinion is clear and straightforward. "*Certainly it was not expected that the Congress would be regulated with any degree of exclusiveness by the members of one medical association, however numerous, and I think it quite as certain that, if this had been thought possible, the proposal that the next meeting should be held in the United States, would not have been adopted.* I am sorry also to feel sure that if the Congress be not supported by the eminent men who have now declared that they will take no part in it, the members of the profession in this country who will attend it will be very few."

We consider it as now certain that the European members of the Congress have, through their Executive Committee, the power to prevent any material interference with the organization and work of the Congress itself, but, while this does away with our fears lest the progress and usefulness of these great international scientific gatherings should be checked by the action in this country, it increases our anxiety as to the effect of this discord upon our reputation abroad, and on our associations at home.

The action of the Original Committee,—of the American Medical Association,—and of the New Committee, is now generally understood; and there does not seem to be much use in further comment and criticism upon what is past. The important question now is as to the future. Is there any way by which the impending disgrace can be averted? If there is, it must be such as will induce those who have withdrawn from the organization to return and coöperate heartily. To the best of our knowledge and belief, derived from an extensive correspondence and from personal interviews, there is but one way to do this, viz., by dropping the Code question entirely, confirming all the appointments of the Original Committee, and leaving to the enlarged Committee which it created, including the Presidents of the Sections, the work of making additional appointments, completing the organization, and carrying out the work to its completion. If this be done, we believe that questions of appointments, etc., will be settled to general satisfaction, and that, although the difficulties of the work will be greatly increased, the Congress will be, what we all desire it should be, a great success.

If this be not done, we do not believe that the Congress will meet in this country in 1887.

PEPTONURIA.

WHATEVER may be the value which will ultimately attach to the so-called delicate tests for albumen which have been introduced into urinology during the past three years, one of the most useful purposes they will have served is the calling of attention to the possibility of the presence of peptone in the urine. And, although, as a result of such attention a vast amount of information has been acquired in rela-

tion to peptonuria, it is probable that we are still on the threshold of such knowledge. Indeed, we may go further and say that as yet we know not whether our information is altogether correct, or whether we may not even be compelled ere long to give up much of it and substitute it by other. At the same time it is our duty to our readers to furnish them with an accurate statement of the recent advances in medical knowledge, and we propose herewith to give a summary of what is now known concerning peptonuria and the tests therefor.

In the first place, it is well known that peptone is a proteid substance which is the final result of the digestion of albuminous food by the agency of the gastric juice in the stomach and by the pancreatic fluid in the duodenum. It may also be produced from albumen by the continued action of acids and alkalies, and it is said, also, by the decomposing action of bacteria, and the long-continued operation of a temperature of 268° to 290° F. It differs from albumen and hemialbumose or propeptone in that it is not precipitated by heat or nitric acid, by acetic acid combined with chloride of sodium, or with cyanide of potassium. Like albumen and propeptone, it is precipitated by tannin, corrosive sublimate, phosphorwolframic acid, Millon's reagent, and by potassiomercuric iodide and picric acid, both of which are among the recently suggested delicate tests for albumen; but when precipitated by the latter reagents it is redissolved by heating. It is characterized by the purple reaction its solution strikes with sodic hydrate and a little salt of copper. The sensitiveness of this so-called "biuret" reaction is increased by certain coloration of the fluid, and especially the yellow. So delicate is it that a solution so weak as 1 part in 1000 responds promptly. This reaction is shared by propeptone, while albumen produces only a blue coloration, under no circumstances a red or violet. It has been suggested that peptone bears the same relation to albumen as grape sugar to starch—that is, it is a hydrate of albumen.

Peptone is not present in healthy blood or normal urine, and even during digestion the portal vein contains but traces of it. Injected into the blood, it disappears from it very quickly, a certain proportion reappearing in the urine, while some is taken up by various organs of the body. These organs also appear to retain any small excess which may have been introduced into the blood from over-ingestion of meat. It would seem, therefore, that it is converted into albumen at the moment it is absorbed into the circulation, and is incapable of taking the place of albumen in the blood, although this has been alleged by Plosz, Maly, and Adamkiewicz. During health, too, the various organs of the body contain traces of it, but it is a constant constituent of pus, as was first shown by Hofmeister. It was found by Salkowski to be abundantly present in the leucæmic liver and spleen.

In testing for peptone in urine by Hofmeister's method (*Zeitschr. für Physiol. Chemie*, 1880, Bd. iv. S. 260, und Bd. v. 1881, S. 73), the peptone is precipitated by solution of tannic acid, either with or without previous treatment by acetate of lead, for the purpose to be named below. The precipitate, after twenty-four hours, is thrown upon a filter to which some tannic acid and magnesium sulphate have been added; the object of the latter being to prevent the peptones from being washed out of the precipitate. The precipitate is now thoroughly mixed in a capsule with saturated baryta water, and after the addition of a fragment of solid baryta heated to boiling. If care is not taken to mix intimately the precipitate with the baryta, resinous masses form during the heating, which interfere with the proper action of the baryta. After a few minutes the mixture is filtered, baryta water being again added, and thoroughly shaken with it until the fluid filters off from the dark colored precipitate, either colorless or slightly yellow. It now contains no tannic acid, as will appear on neutralizing the fluid and adding chloride of iron.

To the filtrate are now added a few drops of a solution of sulphate of copper, the mixture well shaken and filtered. If the filtrate is a bulk of four to five centimetres thickness, and shows a red or violet color, peptone is present.

The method with tannic acid also gets rid of propeptone, or hemialbumose.

v. Jaksch, who has made a very extensive clinical study of peptonuria, the results of which were published in *Zeitschrift für Klinische Medicin*, 1883, prefers to precipitate the peptone by phosphorwolframic acid, instead of tannic acid, by the following process, also suggested by Hofmeister: The urine, mixed with about one-tenth its bulk of hydrochloric acid, is treated with solution of phosphorwolframate of sodium, acidified with hydrochloric acid and filtered promptly, since in standing there is deposited on the slightly colored precipitate a layer of reddish flocculi, whence the coloring matter subsequently disappears. The precipitate is washed with a solution of sulphuric acid, three to five per cent. strong, then turned into a capsule, intimately mixed with baryta in substance, the mixture treated with a little water, and, after being warmed for a short time, filtered. The filtrate is then treated with copper solution as above. In this method no regard is paid to the presence of propeptone, and Salkowski advises that the urine be tested for this substance, and, if it is present, that it be removed by the process recommended by Hofmeister for the separation of albumen, which should, also, always be first separated in the following manner: 500 cubic centimetres of urine are treated with 10 cubic centimetres of a concentrated solution of ace-

tate of sodium, and a concentrated solution of chloride of iron added, until the fluid acquires a permanent red color. The strong acid reaction is now neutralized, or nearly neutralized, by an alkali, condensed by boiling, and, when cool, thrown on a filter. If the iron and alkali are added in proper proportions, the filtrate is free from iron and albumen, as may be shown by adding acetic acid and ferrocyanide of potassium. A trace of iron does not, however, interfere with the test.

Mucin, the presence of which is shown by a cloudiness which arises on the addition to urine of acetic acid alone, must also be separated, and this can be done by adding a solution of neutral acetate of lead, until a thick, flocculent precipitate is produced. Filtration removes both the lead and the mucus. This may be done at the very beginning of the process, as recommended by Hofmeister, and practised in each instance by v. Jaksch. It has the advantage also of simultaneously decolorizing the urine.

Solution of sulphate of copper and sodic hydrate, or, what has been recommended as a substitute, Fehling's solution, directly applied to the urine, without previous treatment, cannot be regarded as a reliable test for peptone. So that a trustworthy, ready method for testing peptones does not exist, unless we adopt that of Dr. George Johnson, with picric acid.

We have mentioned that peptones, like albumen, are precipitated by picric acid; but, unlike albumen, the precipitate thus obtained is redissolved on heating. The same is true, however, of the acid urates and vegetable alkaloids, among which quinine and its allied derivatives are conspicuous. It is well known that the administration of ten grains of any of these alkaloids will speedily so influence the urine, that picric acid promptly develops in it the characteristic opalescence of albumen, which, unlike albumen, also disappears on being warmed. As Dr. Johnson says, the sediment of urates is readily distinguishable from that of peptones by the microscope, because the former are found to be made up of large granules of urate of sodium and uric acid crystals, while freshly precipitated peptones appear quite homogeneous under the microscope; but when, having been dissolved by heat, they are reprecipitated on cooling slowly, they contain exceedingly minute granules, which exhibit very actively the dancing Brownian movement. If, however, the liquid be cooled suddenly, by plunging the test-tube in cold water, the precipitate does not become granular until it has been allowed to stand for some hours. The difference in the fresh precipitate with the vegetable alkaloids and that of peptone, according to Johnson, is, that it is finely granular, while the freshly precipitated peptones are homogeneous.

Hofmeister suggests, too, a shorter, but coarser, test for peptones, wherein the urine is treated with an excess of solution of acetate of lead and filtered. The filtrate, which should remain clear, on the addition of acetic acid and ferrocyanide of potassium, is treated with one-fifth of its volume of concentrated acetic acid. To this is added a solution of phosphorwolframate of sodium, acidified with acetic acid. If a cloudiness makes its appearance within the first five minutes, peptone is present. If the urine does not contain peptone, it will remain clear for an hour or longer.

Quantitative estimation of peptone may be made by the polarimeter, for the details of which we must refer our readers to the textbooks.

Hereafter we shall have something to say as to the clinical significance of peptones.

CHERON'S TREATMENT OF CHRONIC PELVIPERITONITIS.

THE treatment of chronic inflammation of the pelvic peritoneum is in many cases tedious, and often very unsatisfactory. The pain, the tenderness, and the inflammatory deposits—the last in some cases simulating new growths, and not unseldom mistaken for them—are very slow in disappearing in many cases under methods of treatment hitherto employed. In consequence of these facts, we look with great interest upon a plan of treatment which Chéron has employed with remarkable success, and which he publishes in the June number of the *Revue Médico-Chirurgicale des Maladies des Femmes*. He uses hypodermatic injections of the crystallized phosphate of soda. The solution, which should be freshly prepared and carefully filtered, is made of one part each of crystallized phosphate and of sulphate of soda to twenty parts of distilled water. The quantity used for an injection is one drachm; it should be injected into the subcutaneous connective tissue, not into the subdermic. The injection should be made slowly, and massage of the part made for a minute or two. The injections are to be repeated every six or eight days.

PUNNING IN MANIA.

DR. SAVAGE, in his recent work, *Insanity and Allied Neuroses*, speaks of "rapid verbal association, punning, and verse-making" in mania. In regard to punning, he unfortunately does not tell us that the insane punsters had, previous to their illness, been addicted to this indulgence, and probably it is just to conclude that it is to be considered a manifestation of their mental disease.

This is a very important statement, but we cannot suppose that punning is, as a rule, an indication of insanity. Homer did not disdain punning, for it will be remembered that the wily Ulysses thus deceived the monster Polyphemus. Excellent puns, too, have come down to us from the good old days

of Rome, while in modern times who can forget such manifestations of wit by Molière, Charles Lamb, and Thomas Hood? In our own country the most distinguished of literary physicians, rich in wit and wisdom, rich in fame, but richer in the love of all who know him, has occasionally contributed a sparkling pun to life's merriment. Another eminent literary physician who knows how to make fat and blood, also knows how to make a pun —one knowledge he has communicated to the profession, but the other he has not.

Of course, we cannot in the light of these illustrious examples for a moment think that all punsters are insane. But if a man makes bad puns—and we are sorry to say many puns are bad, bad because poor, poverty thus becoming a crime—is he to be regarded as crazy or criminal? There are not wanting those who unhesitatingly look upon such indulgence as one of the greatest crimes; a man who makes a bad pun is, according to them, ready for any minor wickedness, such as theft, arson, or murder. Others, indeed, go so far as to relegate all puns to dime museums and strolling minstrels. If one ventures upon the most innocent verbal play in their presence, he is soon made aware that he could with greater safety have trodden upon their corns, or spoken disparagingly of one of their most intimate friends, and is fortunate if he be not at once consigned to Coventry, or to Hades.

But let us be charitable; some one laughs at the weak punster's wit, some one applauds his effort; nay, he may, at times, "set the table in a roar"—truth compels us to say that at times "the table" roars most readily, and applauds boisterously the most trivial things. Now they who thus do, aid and abet the punster's immoral practice, and should be held to strict account at the bar of public opinion. He has become intoxicated by praise, like the village poet in Dr. Holmes's "Guardian Angel," who did not know how valueless his rhymes were until he attempted to sell them to a publishing house. He, himself, is possibly to be regarded as simply feeble minded in some cases, while in others it is probable that the indulgence is a manifestation of commencing insanity, and then a prompt removal to an institution for the insane, and not confinement to a gaol, is the proper remedy.

The view here taken will do more to repress the common practice of punning, than has the severe literary criticism to which it has been subjected. We wish to say, however, that the force of this criticism has been weakened by the inconsistent conduct of some of the critics. Sidney Smith, for example, asserted that puns were justly in very bad repute; and yet he, according to Southey, was "Joke-Smith to the *Edinburgh Review*," and certainly made many puns. This inconsistency between criticism and conduct is only to be explained by the fact that he was a preacher, not a practitioner. But returning, few men or women are willing to be thought crazy, and therefore they will avoid that which may excite suspicion. Dr. Savage has enlarged our knowledge of the disease, and opened the way for important reform.

So much for bad punsters The good ones will not be prodigal of their ware, but remember the wear advised by Jeffrey for one who has a blue stocking—a long petticoat.

HEMIALBUMOSE OR PROPEPTONE.

ANOTHER one of the proteid substances sometimes found in urine, and to which increased attention has been called by reason of the introduction of the so-called delicate tests for albumen is hemialbumose.

This substance is an intermediate product in the conversion of albumen into peptone, in the act of gastric digestion. It is therefore abundantly present along with albumen in the gastric contents, and, unlike peptone, is also found in the blood during digestion. It is identical with the albuminous substance known as Bence-Jones's albuminous body or Mulder's proteindentoxyd found by Virchow in the bone marrow in osteomalacia, and by Fleischer in normal bone marrow.

Hemialbumose, like albumen, is insoluble in alcohol; also insoluble in pure water, but very soluble in water containing only traces of acids, alkalies, or salts. It is not precipitated by heat from its watery solutions as is albumen, but if the solution be made strongly acid and concentrated salt solution be added thereto, it is precipitated. If the cloudy fluid be now heated it becomes transparent, but again turbid on cooling. A further large addition of salt maintains the precipitate in spite of heating. It is precipitated by pure nitric acid, but redissolved with the production of an intense yellow color on heating, and reprecipitates on cooling. An excess of nitric acid redissolves the precipitate even in the cold, with the production of the same orange-red color.

In these respects hemialbumose differs strikingly from both peptone and albumen. It is like peptone in that it exhibits the biuret reaction with an alkali and salt of copper, and like albumen in that it is precipitated by acetic acid and ferrocyanide of potassium.

In order to test the presence of hemialbumose the albumen must first be removed. This is accomplished by acidifying the urine with a few drops of acetic acid, adding about ⅓ its volume of concentrated salt solution, boiling, and filtering off the precipitate. The filtrate is then allowed to cool, and if a turbidity arises or is produced by the further addition of salt solution, which disappears by heating, and reappears with cold, propeptone is present.

Hemialbumose is removed from fluids by adding acetate of iron and boiling, or by boiling with hydrated lead oxide.

Hemialbumose was first found in urine by Macynter and Bence-Jones, in the disease known as osteomalacia, and by Lassar in artificial nephritis.

REVIEWS.

A MANUAL FOR THE PRACTICE OF SURGERY. By THOMAS BRYANT, F.R.C.S., Member of the Council and Court of Examiners of the Royal College of Surgeons; Senior Surgeon to and Lecturer on Surgery at Guy's Hospital; Memb. Correspond. de la Société de Chirurgie de Paris. With seven hundred and twenty-seven illustrations. Fourth edition, thoroughly revised. 8vo. pp. 1026. Philadelphia: Lea Brothers & Co., 1885.

THE most cursory examination of this edition bears out the claim that it has been "thoroughly revised," while a more careful scrutiny reveals that much new matter has been added, and the old, in a measure, rearranged, so that a more natural sequence has been secured. Unlike the third American edition, this fourth one is an exact reprint of the fourth English edition, although the American publishers call attention to the fact that Mr. Bryant "has seen fit to accept many of Dr. Roberts's additions" which appeared in the previous edition.

This book is essentially what it purports to be, viz., a manual for the *practice* of surgery. In consequence, little space is devoted to the theory of surgery, but enough is said to enable the reader to treat all ordinary surgical affections with due reference to their pathology. Much more than any such qualified praise is due to that portion treating of intestinal obstructions and their operative treatment, where the best of all teaching—that drawn from an extended personal experience—is given. Probably no surgeon has ever performed such a number of colotomies as Mr. Bryant, viz., eighty-two; and few have, therefore such a right to dogmatize as to the value of this operation. It may be well, therefore, to introduce the conclusions at which the author has arrived.

1. "That in all cases of cancerous stricture of the rectum or colon, including the annular, which are not amenable to lumbar colectomy or anal excision, right or left lumbar colotomy is strongly to be advocated, with the well-grounded hope of relieving suffering, retarding the progress of the disease, and of prolonging life for five or six years.

2. "That lumbar colotomy is valuable as a curative operation in syphilitic and simple ulcerations of the bowel which resist other treatment, including cases of recto-vesical fistula, and that it is remedial in examples of volvulus of the sigmoid flexure, as well as of obstructions caused by tumors.

3. "That to secure these advantages it is necessary for the operation to be performed before the pernicious effects of obstruction occur."

We have always viewed with special favor the whole section upon intestinal obstructions, but the additions and alterations in the present edition have much increased its value. There are some points, however, which we regret the omission of, but which we cannot here specify. The illustrations are unusually good, being both clear and at the same time artistic. We would call attention to the section upon "Tumors," which, although perhaps good from a clinical standpoint, is certainly not in accord with modern views. We refer especially to the author's teachings as to the sarcomata, which are termed "Semi-malignant." Now we are unacquainted with any more *wholly* malignant growths than certain of the tumors now universally termed sarcoma, and the histological characters of which the author correctly describes. We can neither then agree as to their *semi-malignancy*, nor with the statement that they solely "return either in the spot from which they originally sprang or from its immediate neighborhood;" some of them do, but as a class, they behave far differently. It is true that the lymphatics usually remain uninvolved, but by means of the blood-current systemic infection too often occurs with frightful rapidity. Perhaps the author would call such tumors encephaloid carcinomata, but histologically from his own descriptions, they are sarcomata, and are universally so considered by pathologists. This perhaps is only a minor blemish, but it is apt to mislead the inexperienced, and is one, therefore, to which attention should be called.

Although written chiefly from an English standpoint, Bryant's *Surgery* is a fair work in which due credit is given to both foreign and American surgeons. It is peculiarly well fitted for the student or busy general practitioner who wishes to be taught the views of surgery held by foreign surgeons, but can hardly supersede text-books written by and for Americans. With these latter alone, the student is apt to obtain a too circumscribed view of surgery, but if he will supplement his reading by some such work as that under review, without extended study he will be enabled to gain something like a cosmopolitan view of both the science and art of surgery.

YOUNG FOLKS' PHYSIOLOGY—OUR BODIES, AND HOW WE LIVE; AN ELEMENTARY TEXTBOOK OF PHYSIOLOGY AND HYGIENE, FOR USE IN THE COMMON SCHOOLS, WITH SPECIAL REFERENCE TO THE EFFECTS OF STIMULANTS AND NARCOTICS ON THE HUMAN SYSTEM. By ALFRED M. BLAISDELL, M.D. 12mo., pp. vi. 285. Philadelphia: Cowperthwait & Co., 1885.

A LARGE number of States have recently passed laws requiring that, in the Public Schools, physiology and hygiene shall be taught with special reference to the effects of alcohol and narcotics on the human system. This demand has produced quite a large crop of books—good, bad, and indifferent—most of them written evidently to catch the market. They bear evidences of haste, and even in some cases of ignorance. We pointed this out in one notable case in our issue of March 15, 1884 (*Brand's Physiology*).

The present volume is an excellent example to the contrary. It is the work of a man who knows what he is talking about, and who also has the knack of the true teacher. His ideas are clear, and his language perfectly simple, so that any child of ordinary intelligence can understand him. Moreover, he has Agassiz's true idea of the method of teaching. He is not satisfied with

a dry description, but has appended to the book a good chapter of "experiments," such as any teacher or scholar can easily make. This is a cardinal point. It is one thing to tell a pupil about the "animal" and "earthy" matter in a bone, but it is quite another thing to have him get two bones and burn one and soak the other in acid and see the results of the two processes for himself. The whole series of these experiments is equally simple and effective, for they direct the teacher and pupil in the method of studying the main facts of anatomy and physiology in the same objective way. We would suggest, however, that a sheep's eye would be, as a rule, more easily accessible than that of a codfish when it is desired to dissect that organ. An excellent glossary and a full index complete this well-written and useful volume, which we can commend unreservedly to school boards and teachers as just the thing they will want.

In the most difficult part of the book—the due appreciation of the effects of alcohol and tobacco—the author seems to have been very happy in stating the facts in a clear and non-partisan manner. He has shown the bad effects of both—especially of alcohol—without on the one hand trying to mitigate their evils, or, on the other, to exaggerate them for a purpose, as would be done by the fanatic. The book will do good most of all by its entire fairness.

We would like also to point out two or three errors. Thus, the gluteal muscles are spoken of as on the back of the thigh; Macé is written twice at least without the accented é; and, by a curious blunder, the pupil is spoken of as the "apple of the eye," whereas when we use that expression we mean by "apple" the whole "ball" of the eye.

We notice, also, as a merit, the reference to the *American Health Primers*, *Wilson's Hygiene*, and numerous other excellent and standard works as "collateral reading."

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, June 4, 1885.

THE PRESIDENT, B. F. BAER, M.D., IN THE CHAIR.

DR. BERNARDY reported a case of

GESTATION IN A SARCOMATOUS UTERUS, SIMULATING EXTRAUTERINE PREGNANCY.

On October 3, 1884, he was requested to visit Mrs. McG., delicate, age about thirty, married six months. She was said to be suffering from a cold. He found the patient up. Temp. 105°; pulse 130, with a high fever and a severe cough. Examination of the lungs revealed double pneumonia. At the same time, noticing the abdomen prominent, he inquired, and was informed that pregnancy was five months advanced. The abdomen was rather large for that period. On Sunday, October 5th, she complained of a sharp pain in the right inguinal region, the pain was excruciating, and demanded the administration of large doses of morphia before any relief was obtained. He found the right inguinal region filled by an immense growth reaching almost to the lower border of the liver. The uterus or what appeared to be the uterus was enlarged, and pushed well toward the left side. On vaginal examination, found the right side of the pelvis filled by a growth. At first thought he detected fluctuation, but closer examination showed it to be hard to the touch. The uterus was jammed well towards the left, and was immovable, the neck somewhat absorbed, the os tilted up behind the pubis. To reach it the finger had to be passed well upward; it was closed and soft. The patient had never had any uterine trouble, menses always came without pain; they never appeared after her marriage, which occurred one week after a period. Her health remained good for three months after marriage, when, while out walking, she was suddenly seized with a sharp lancinating pain in the right side of the abdomen. The pain was so great that she almost fainted, but being a woman of strong will, she finally, after suffering terrible agony, reached home, and went to bed. No physician was called in; next day there were slight traces of blood on her night dress. Under absolute rest the pain subsided, and at the end of a week she was about her household duties. The pain in the side returned if she over-exerted herself. Sexual intercourse was painful, and was followed by traces of blood the next day. Believing that the symptoms pointed to either extrauterine pregnancy, or a tumor complicating pregnancy, he asked Dr. Goodell to meet him. By the time the consultation was held, October 8th, a severe attack of peritonitis had commenced. This complicated matters as a close examination was impossible. On account of the distended and painful condition of the abdomen, it was impossible to trace any outline of the growth or uterus. It was decided that the symptoms and history pointed to extrauterine pregnancy, but that undoubtedly the uterus contained something, whether a tumor or child, in the present condition of the patient, it was impossible to decide; the leaning was toward a pregnant uterus. By October 16th the peritonitis was under control, the lungs no better. October 19th he was sent for, the messenger stating that there was a renewal of the peritonitis. He found the patient in active labor, the fœtus descending rapidly. In half an hour labor was completed. I readily detected the large growth filling the upper portion of the right side of the pelvis; the uterus was surrounded by a hard growth. The cervix was hard. From this time the lungs improved, but she remained extremely weak, and there was a constant dribbling of blood from the vagina. November 3d, the growth was still present and the cervix hard, and I began to think of malignant disease in connection with the tumor. I had applied, night and morning, to the abdomen, ung. hydrarg., belladonna, and iodine, equal parts. This seemingly had the effect of causing the absorption of the large growth, but the mass surrounding the uterus remained the same. November 27th, vomiting occurred and was arrested with difficulty; a bloody discharge from the vagina and a constant sore feeling over the region of the uterus, which was still toward the left side. The patient's condition was not good, she was extremely weak; the slightest exertion would exhaust her and bring on bleeding from the uterus. December 26th he found her suffering from pleurisy, the left pleural cavity full of fluid. January 1st abdominal dropsy had set in. A consultation with Dr. Goodell was held. A positive diagnosis of malignant disease was made.

Prognosis.—Death at any moment. She died suddenly the same evening while talking to her husband.

Post-mortem examination, by Dr. A. E. Roussel, twenty-four hours after death; patient greatly emaciated. *Thorax:* A large amount of effusion completely filling up the left pleural cavity, while the cavity of the right side was partially filled; both lungs were compressed upwards. No adhesions. On section the lungs appeared mottled, and were hepatized in general appearance, but were otherwise healthy. *Heart:* On opening the pericardium found a moderate amount of serous fluid, vegetations on mitral valve—weight eleven ounces. *Abdomen:* Entire cavity was greatly distended with dark fluid full of broken-down lymph. The intestines were forced upwards; there were slight evidences of beginning peritonitis. A portion of the ileum on the right side presented a black unhealthy appearance bordering on gangrene. The uterus was increased in size. The outer surface presented an irregular mottled appearance, large veins covered its surface; at the fundus there appeared a spot about one inch in diameter, of a bluish tinge. On pressure by the finger the surface readily broke. Underneath was a cavity about the size of a large hickory-nut which did not communicate with the interior of the uterus. On opening the uterus its cavity was found to be almost obliterated, the tumor seemed to have entirely absorbed the true uterine tissue with exception of the neck. In the body of the tumor were observed small masses or growths varying in size up to that of an egg. The ovaries were small and seemed to have participated in the general disease. Microscopic examination proved the tumor to be of the adeno-sarcoma variety.

At first he was convinced that he had a case of extra-uterine pregnancy; but the peculiar hardness of the tumor made him doubtful. Here was a patient that had never had any uterine ailment. Marries, becomes pregnant; at the end of the third month, without any premonition, while quietly walking, is seized with pain of an excruciating nature in the right side, goes to bed and remains quiet, the next day blood flows from the vagina. She remains comparatively well for two and a half months more, when she is again suddenly seized with pain in the same side, followed by peritonitis. A tumor is found in the affected sides, the uterus is enlarged, but not sufficiently so for a five and a half months' pregnancy, the os giving no signs of that softening which should accompany pregnancy. Could we have a group of symptoms more allied to those of extrauterine pregnancy?

DR. J. M. KEATING made some remarks on

INFANT FEEDING.

He said: At my request, Dr. Charles Potts has instituted a series of experiments which have a decided practical value, and we hope to present them to this Society at an early date, but I desire to place on record a statement of the results so far reached, which appear to be interesting and important. The question often arises, Is it of advantage, or not, for an infant to be partly nursed and partly bottle-fed? What action has milk upon starch, if any? To answer this the following tests were made: (1) Sample of milk composed of the milk of several women. A quantitative estimation of the sugar in it by Fehling's method showed 6.84 per cent. Ten c.c. of this milk were then taken and ½ gramme of powdered starch added, allowed to stand at a temperature of 99° for thirty minutes, after which 5 c.c., diluted with 45 c.c. of distilled water, were tested and showed 8.62 per cent. of sugar. The other 5 c.c., after standing sixty minutes, gave 9.09 per cent. (2) Another sample, found to contain 7.14 per cent. of sugar, had a ½ gramme of powdered starch, as in No. 1. In thirty minutes it gave 9.803 per cent. of sugar in 5 c.c. The other 5 c.c., after remaining sixty minutes, gave 8.62 per cent. Possibly part of the sugar deposited and was drawn off with the first 5 c.c. (3) Another sample showed 6.32 per cent. of sugar, and, after adding the starch as before, gave in the first 5 c.c. 8.19 per cent. The next 5 c.c. 7.93 per cent. These investigations showing that woman's milk gave an increase of sugar after digesting with starch. (4) A sample of cow's milk was tested and found to contain 3.87 per cent. of sugar; to this was added a ½ gramme of starch to 20 c.c. At the end of thirty minutes 5 c.c diluted with 45 c.c of distilled water showed no increase of sugar. (5) A sample of cow's milk gave 4 per cent. of sugar, and was treated as before, but at the end of thirty minutes, and then sixty minutes, it gave the same result. (6) Another sample of cow's milk gave 3.703 per cent. of sugar; was treated as before with the same amount of starch. In thirty minutes 5 c.c. gave same result; in sixty minutes 5 c.c. gave same result. These investigations showing that cow's milk gave no increase of sugar after adding starch. Does the acidity of cow's milk prevent the sugar change? Does the sugar change continue in an acid medium? (7) Took another sample of human milk—from one woman. It yielded 6.25 per cent. of sugar; added starch as before. In thirty minutes 5 c.c. gave 7.14, and in sixty minutes 5 c.c. gave 7.6 per cent. Took 10 c.c. of this milk (6.25 per cent. sugar) and added a few drops of chemically pure dilute hydrochloric acid, enough to acidulate it faintly, and then added ½ gramme of starch, and let it stand as before. In thirty minutes 5 c.c. gave 6.41 per cent., and in sixty minutes 5 c.c. gave 7.35 per cent. of sugar. (8) Another sample of woman's milk, without starch, gave 6.17 per cent.; with starch, 7.24 per cent, Ten c.c. of the same acidulated with hydrochloric acid, chemically pure, diluted, gave in thirty minutes 7.35 per cent. In these tests 10 c.c of Fehling's solution were used with 40 c.c. of distilled water.

If future investigations prove the correctness of these statements, we may safely assert that the nursing woman may supplement her breast milk with some well-prepared, digestible form of food containing a small quantity of starch advantageously, and also that the amylolytic ferment will remain active in the slightly acid stomach of the infant.

CHICAGO GYNECOLOGICAL SOCIETY.

Stated Meeting, May 29, 1885.

THE PRESIDENT, H. P. MERRIMAN, M.D., IN THE CHAIR.

DR. FRANKLIN H. MARTIN presented an inaugural thesis entitled

THE NORMAL POSITION OF THE UTERUS AND ITS RELATION TO THE OTHER PELVIC ORGANS,

in which he opposed the extreme theories of Schultze, Fritsch, and Savage, for the following reasons:

1. In extreme anteversion, the wave impulse would

strike the posterior broad surface of the body of the uterus, and drive it down upon the bladder and anterior wall of the vagina, while, on the other hand (the perpendicular theory of Savage), the anterior broad surface of the body would receive the impulse to an equal disadvantage, displacing the uterus backward and driving the cervix downward, while if the uterus occupied the position between these two extremes, the narrow crest of the fundus would receive the impulse in the line of the axis of the uterus and all the force would become equally distributed through all of its supports. Here, too, the organ would not so directly receive the whole impulse, as it would be equally dispersed upon its sides and the posterior ligaments and anterior supports, and its lateral attachments would receive to an equal extent, their portion of the impulse.

2. The manner in which the bladder collapses, to our mind, precludes the possibility, or at least the probability of the uterus occupying normally the position of extreme anteversion. The bladder, when collapsed, or when empty, is a triangular-shaped body—not flat like a plate: the base corresponding to its peritoneal surface, the apex corresponding to the urethra. The posterior or inferior surface corresponds to the anterior wall of the vagina, to which it is intimately attached; the anterior wall corresponds to the symphysis, to which it is loosely attached. It is readily seen, then, that the bladder distends only in the direction of the peritoneum, or its one free surface. According to the extreme anteversion theorists, the free surface of the bladder and the uterus are in apposition. If such be the case, the uterus changes its position constantly, as the bladder normally relaxes or contracts,—this seems to us very improbable. We believe that this space is usually filled with the light coils of the small intestines.

3. The broad ligaments receive their external attachments at a point about equidistant from the centre of the sacrum posteriorly, and the pubic junction anteriorly, in such a way as to divide the plane of the brim of the true pelvis into about equal halves. If the body of the uterus occupies a position in the centre of the pelvis on a direct line with the ordinary attachments of these ligaments, which it is at least rational to believe is the case, it occupies a position between the perpendicular of Savage, and the extreme anteversion of Fritsch.

4. With extreme anteversion, the cervix, with the fundus occupying a position behind the symphysis would necessarily have to occupy a position far back in the pelvis, within three-fourths of an inch of the sacrum,—with a normal conformation of parts, this is impossible without interfering with the rectum.

5. If we take the measurements of Foster and Litzmann into consideration, we can at once demonstrate the impracticability of the position given by Savage—*i. e.*, the perpendicular. The cervix occupies a position, normally at a distance of one and one-half inches from the sacrum, the rectum intervening. It is impossible for the uterus to assume anything like a perpendicular with the cervix in this position, on account of the anterior curve of the sacrum above, which necessitates an anterior version from the perpendicular of at least fifteen degrees.

PROFESSOR W. W. JAGGARD was pleased with the selection of the topic, and the method of discussion, but did not agree with Dr. Martin in all his conclusions. Bandl had made a correct statement of the diversity of opinion upon this subject, in his essay on "The Normal Position and the Normal Relationship of the Uterus, and the Pathologico-anatomical Causes of the Symptom of Anteflexion" (*Archiv. für Gynækologie*, Band xxvi. Heft 3, 1884), read before the Gynecological Section of the Versammlung deutscher Naturforscher und Ærzte in Freiburg, September, 1883. "In the course of time, almost every position of the uterus, with the exception of prolapse, has been accepted as the normal by different anatomists and gynecologists, and particularly by the more eminent ones."

Kölliker (1882), from a series of examinations of the cadavers of girls, from ten to eighteen years old, has concluded that the uterus is not bent, nor curved upon itself, but is straight, and that its long axis corresponds with the principal axis of the small pelvis. Its position is variable within certain limits, depending upon the condition of the bladder and rectum. This opinion coincides closely with judgments of Kohlrausch (1854), Le Gendre (1868), Freund, Carl Braun (1857), J. Marion Sims (1855); Langer (1881). Professor Paul F. Mundé, in his recent excellent work on *Minor Surgical Gynecology*, favors these views to the extent, that he says, "with the woman in the recumbent position, the examining finger is unable to touch the body of the uterus before or behind the cervix, if the uterus is normally situated."

Bandl, in the paper to which allusion was made, confirms Kölliker's view. The evidence he furnishes is of a high order. His methods of investigation were:

1. The attentive examination of living women.

2. Examination and observation before and during the operation of laparotomy.

3. The bimanual examination of the organ in cadavers, before and after abdominal section.

4. The comparative anatomical examination of many *uteri*.

DR. PHILIP ADOLPHUS thought, with Emmet, that "there is no common standard by which to determine the proper position for the uterus in all women, but that in each individual there is a point, or plane, in the pelvis which the uterus should occupy when she is in a state of health and not pregnant." He referred in detail to Emmet's "normal or health line," and to the pathological character of displacements above or below this line. It is a matter of relative insignificance whether or not the long axis of the uterus coincides with any particular pelvic axis. In the concrete case, the sensation of the individual will indicate a normal or abnormal position.

PROF. DANIEL T. NELSON said that the uterus is fixed in a position of unstable equilibrium by the annular and other ligaments. It can move to a certain degree in every direction, and return to its original, normal position. Displacement above or below Emmet's "health line" is productive of symptoms, if the uterus remains fixed in such a position, as is usually the case when violence causes the dislocation. Departure from the principal axis of the pelvis is a comparatively insignificant movement, viewed absolutely. The vagina and perineum are not primary supports of the uterus, and only assume this function when, as the result of the relaxation of the proper uterine supports, the organ is displaced downwards. This secondary character of

the vaginal and perineal support was capable of demonstration by the examination of a woman in the erect attitude. Upon coughing or sneezing the uterus will descend and receive support from the vagina and perineum, only to regain its original position when the excitant is removed. This remark applies exclusively to normal organs in normal position.

He wished to emphasize the statement that the rectum is not the normal receptacle for the feces. Anatomy and physiology teach that in the normal condition the gut is empty up to the sigmoid flexure. The sigmoid flexure is a sort of valve to retain feces. He narrated the history of a case of retention of urine in a puerperal woman, in which the bladder was displaced towards the left iliac fossa, while the uterus was directed towards the right.

PROF. CHARLES WARRINGTON EARLE related the history of a case of retention of urine in a puerperal woman, the bladder displacing the uterus upwards and backwards. Upon the introduction of a catheter, four quarts of urine were evacuated and the pelvic viscera returned to their normal relations.

DR. EDWARD WARREN SAWYER said the uterus had great latitude of movement antero-posteriorly and laterally; elevation above or depression below the normal plane, even to a slight degree, was productive of pain. The introduction of a pessary, which merely elevated the uterus when partially prolapsed, without altering flexion, is sufficient in many cases to afford complete relief. While a student he had taken plaster casts of the vagina. Such casts were of uniform shape, while they differed in size. They were curved, convex posteriorly, concave anteriorly. They were never shaped like an S. The curve did not correspond to that of the anterior surface of the sacrum, but to the floor of the pelvis.

DR. H. T. BYFORD thought Dr. Sawyer's experiments were faulty. When plaster of Paris was injected into the vagina, with the rectum empty, the vagina would act exactly as the rectum would under similar conditions.

CORRESPONDENCE.

THE ORGANIZATION OF THE INTERNATIONAL MEDICAL CONGRESS.

[THE accompanying letter has been received in this city, and is published for the information of the American profession, as it gives an authoritative statement concerning the manner of organizing preceding congresses, as well as the general understanding at Copenhagen in reference to the organization of the Washington Congress.

Sir James Paget, as is well known, is a member of the present Executive Committee of the Congress, and the President of the London Congress, and the immediate predecessor of the late Prof. Panum in the Presidency of the Copenhagen Congress, and he, therefore, speaks with the highest authority concerning all matters which pertain to the rules and customs of the Congress.—ED.]

1 HAREWOOD PLACE, HANOVER SQUARE,
LONDON, July 22, 1885.

DEAR DR. HAYS: I am very sorry to learn from some of your journals, as well as from letters which I have received, that there are serious differences of opinion among the members of our profession in your country as to the arrangements to be made for the International Medical Congress which it is proposed to hold in Washington in 1887. The deep interest which I feel in the Congress makes me venture to write to you in the hope of helping towards a right decision of some of the questions in dispute; and chiefly, by stating what I believe to have been the custom at former meetings.

I believe that a principal question relates to the authority, if any, which was given by the Congress at Copenhagen in 1884 to the gentlemen who conveyed the invitation that the next meeting should be held in the United States of America.

I believe that it has never been considered that the members at one Congress should give any formal authority for any part of the organization of the next. At each meeting some place has been named at which it was deemed desirable that the next should be held; and at the same time, or soon afterwards, some persons of high repute in that place have been asked to take such steps as they might deem necessary or most likely to promote a successful meeting.

Thus, after the Congress at Amsterdam, in 1879, the President, Professor Donders, wrote, in the first instance to Sir Joseph Lister and Sir William Bowman, and by them, and those whom they asked to act with them, the first and all the principal subsequent measures were adopted for the promotion of the meeting in London. Sir Risdon Bennett, the Chairman of the Executive Committee, communicated to Professor Hannover and Professor Panum, of Copenhagen, the desire that the next meeting might be in one of the chief cities of Scandinavia; and those gentlemen, and others acting with them, began and had the principal part in all the arrangements for the Congress in Copenhagen.

I fully believe that it was understood at Copenhagen that the same course would be pursued in the organization of the Congress to be held at Washington. I was at the General Meeting at which, after some discussion, the majority of the members present expressed the wish that the next Congress should be in the United States; and I have no doubt that it was expected that the distinguished American gentlemen there present would obtain the coöperation of the most eminent of their professional brethren, and would, with them, make all the arrangements which they should deem best.

Certainly it was not supposed that the Congress would be regulated, with any degree of exclusiveness, by the members of one medical association, however numerous; and I think it quite as certain that, if this had been thought possible, the proposal that the next meeting should be held in the United States would not have been adopted.

I am sorry, also, to feel sure that if the Congress be not supported by the eminent men who have now declared that they will take no part in it, the members of the profession in this country who will attend it will be very few. And in this opinion, as well as in all that I have written here, I have the concurrence of several of the most influential of the London Congress with whom, before this writing, I consulted.

Believe me, dear Dr. Hays,

Most truly yours,

JAMES PAGET.

POISONING WITH CANNABIS INDICA, WITH RECOVERY.

To the Editor of THE MEDICAL NEWS.

SIR: In *The Medical Record* of July 11, 1885, Dr. Thomas W. Lauterborn, of Newark, N. J., records "A Case of Poisoning by Cannabis Indica, with Recovery." As the symptoms in these cases are at least alarming to the family, I submit a brief account of a case which came under my observation:

For some time, like "Ludlow," I had been taking the drug to note cerebral effects. A friend of mine, Mr. X., volunteered to be a subject, that I might record physiological symptoms. By mistake, he swallowed pills which represented over thirty grains of ext. cannabis indica. I was unconscious of the error until about one and a half hours afterward, when my friend had entered the stage of excitement, and spoke of dual consciousness, etc. I had previously used emetics upon myself without avail, so gave Mr. X. about two ounces of lime juice. Within ten minutes the symptoms subsided. He was soon himself again; complained only of drowsiness and a heavy feeling in the head. Retired, slept soundly, went to business next morning, "feeling none the worse," as he said, "for last night's dissipation."

On discovering the error I felt the need of giving an antidote, as twenty grains of the same extract previously produced, in my own case, after the stage of excitement, thirty-six hours of deep sleep. I have used lime juice on myself to prevent the drug entirely controlling my will.

Prof. Alfred Stillé mentions the antidotal effects of lime and lemon juice in the United States Dispensatory under the head of Cannabis Indica.

Very respectfully,

J. ALBAN KITE, M.D.

NANTUCKET, MASS., AUG. 2, 1885.

NEWS ITEMS.

NEPHRECTOMY AND NEPHROLITHOTOMY.—On July 25th, MR. KNOWSLEY THORNTON performed abdominal nephrectomy for cystic kidney at the Samaritan Free Hospital. The patient, aged twenty-two, had been under the care of Mr. Manley Sims. A drainage-tube was inserted into the loin, and removed on the second day; the patient is now convalescent. On July 27th, the same operator removed a smooth calculus, weighing two ounces, from the left kidney of a young woman who had been under the care of Dr. George Johnson. The case was supposed to be an instance of strumous kidney in its earliest stage, and the operation was commenced as in abdominal nephrectomy; but, as soon as the kidney could be touched, it was found to contain a stone, and strong adhesions prevented its removal. The calculus was, therefore, extracted, and a glass tube placed in the abdominal, and an India-rubber tube into the lumbar, incision.—*Brit. Med. Journal*, Aug. 1, 1885.

PUBLIC OPINION ON THE CONGRESS ORGANIZATION.—We cannot discuss the merits of this far from edifying quarrel, but we are too greatly interested in the International Medical Congress not to raise our voice in protest against a state of matters which is both a professional scandal and a serious peril to the continued existence of the Congress. Hitherto it has been considered binding upon all participating in the Congress that medical politics shall be entirely excluded from all its proceedings. But apart from that, we must impress upon our American friends the simple consideration that unless the whole profession in the United States combine cordially in the work of the Congress the meeting in Washington is foredoomed to failure. Party spirit is so alien to the whole spirit of the International Congress that a large proportion of those who have previously joined in the meetings would certainly, and with justice, refuse to visit the United States to be the guests of a faction. But we have too high an opinion of our transatlantic friends to believe that this unseemly quarrel, which is disgracing them throughout Europe, will be allowed to continue. We trust that moderating influences will be brought to bear upon both parties, and that, forgetting the past and their own personal predilections, they will cordially unite to promote the success of the meeting in 1887. If, however, the breach now formed is allowed to widen and deepen, it will be the duty of the officers of the Congress in Copenhagen to seek at once an invitation from some country in which the medical profession will not find it impossible to combine for international purposes.—*The Lancet.*

We are not surprised, and must confess being glad, at seeing with what almost unanimous action on the part of the leading members of the profession the result of the Chicago session of the newly appointed Committee has been met. The resignation of nearly every prominent appointee on the full committees and Sections made at that session shows a feeling of dignity and self-respect, and the fact that so many physicians in different parts of the country have expressed their sympathy with that action is plainly indicative of a feeling that something is more than wrong in the position taken by the American Medical Association at its late meeting in New Orleans. The thing to be sorry for is not the fact of these meetings in different cities, and the action there taken by the doctors present, but the fact that all this was made a necessity by the personal ambition of some men who felt that they had been slighted. —*Virginia Medical Monthly.*

It is very well understood that the disturbance at New Orleans was incited by disappointed personal ambitions. The Code and geographical distribution have been used to arouse opposition to the arrangements of the first Committee.—*Boston Medical and Surgical Journal.*

The original committee had done good work in perfecting the necessary arrangements to make the Washington meeting a successful one; hence, to be confronted with the ostensible condemnation of the American Medical Association, led and controlled at New Orleans by a few men of doubtful honesty of purpose, is a burning shame and disgrace. We were in attendance at the New Orleans meeting, and can assure the profession that the sentiment which the meeting seemed to express was not the will of the great majority of the delegates present, but was the secret manipulations of a half-dozen or less, who forced the issue upon the passive and more considerate men, who allowed themselves unwittingly to be imposed upon by the misrepresentations of those who have little if any interest in the welfare of the Association. It is to be hoped, however, that there may yet be a concerted action, and that the Washington meeting, now almost a hopeless failure,

may have instilled into it new life. The best that can possibly be done will not now relieve the matter entirely of the odium which the disreputable conduct of the men referred to have heaped upon it.—*Kansas City Medical Record.*

The officers of the Congress, as selected by the New Committee, are very generally refusing to serve; at least such is the case with those from Philadelphia, Boston, Washington, Cincinnati, and Baltimore, while numerous other resignations have come in from other cities. Many of the most important Sections have thus been left without officers. Five of the original Committee of eight have resigned, including Dr. Billings, and the Secretary General has also declined to serve. Matters have, indeed, assumed such a shape that no one, with any self-respect, can afford to take the places thus left vacant; to be a *second choice*, even under the most favorable circumstances, is always sufficiently humiliating, but to consent to be such in the present crisis, would certainly indicate an utter absence of professional pride.

The New Committee are trying to shift the blame, or responsibility, for their action—in throwing *out* all the New Code men, and putting themselves *in*—upon the impersonal shoulders of the American Medical Association. This is the height of unkindness; for the members of this Committee were, most of them, the very persons who led the poor old Association to take the unwise action it did, and their zeal in so doing resulted in their appointment on the Committee; in other words, it is the old story over again of the monkey, the cat, and the chestnuts, only the monkey in the fable was satisfied with the results which he had obtained at the physical expense of the cat, and did not attempt to attach to her any moral obloquy for her compulsory act.

The cry against the "New Code" men was all bosh. It was raised at New Orleans simply to divert attention from the real purpose of those who uttered it, on precisely the same principle as the matador flaunts his red flag in the face of the bull. A few sharp and unscrupulous politicians—who had no claim to recognition in the organization of the Congress, and had hence received none—used that cry as a means of foisting themselves into prominence. They succeeded in their *ruse*, but "vaulting ambition o'erleaped itself," and the Congress, under their management, is hopelessly fated. They have come to a realizing sense of this fact, and, anxious to stand from under, are now wildly endeavoring to make themselves, and others, believe that the blame for the failure must rest on those who have withdrawn! They may deceive themselves by such audacious claims, but surely no one else.—*Columbus Medical Journal.*

REGULATIONS PRESCRIBED BY THE MINISTER OF THE INTERIOR OF RUSSIA, FOR THE SANITARY CONTROL AND SYSTEMATIC DISINFECTION OF VESSELS ARRIVING FROM COUNTRIES AFFLICTED WITH CHOLERA.—1. All vessels arriving from countries afflicted with cholera are subject to the "observation" prescribed by the Ministry, for fourteen days, in the quarantine harbor.

2. The time of the observation is reckoned from the date of the placing on board of the quarantine guard.

3. The observation consists in keeping the vessel, her crew, passengers, supplies, and cargo under the supervision of the quarantine authorities, and without any communication with other vessels, people, or the shores, until her admission to traffic is found to be perfectly safe.

4. If, upon an examination by the quarantine authorities of the crew and passengers, and an inspection of the vessel and cargo, the master, holding a "clean bill of health," signifies his consent to undertake, at his expense, and under the direction and supervision of the quarantine authorities, the proper systematic disinfection of the vessel, then the observation terminates in seven days, including the time necessary for putting the vessel into proper sanitary condition.

5. The systematic disinfection must be applied to: rags of every description, bedding and clothing (particularly those having been in use, and remaining soiled), excreta of animals, offal of every description, and particularly of animal and vegetable origin, hides, hair, bristles, feathers, wool, felt, and the like; the rooms and spaces occupied by the crew and passengers, and the above enumerated things; the hold of the vessel, and all the persons, without any exception, on board the vessel.

6. The systematic disinfection consists in the following: Offal of every description, and all soiled articles capable of holding the contagious principle of cholera, which are of no value, or which cannot be disinfected, are subject to immediate destruction by burning, or sinking into the sea.

7. Bedding and underclothing, and similar articles, must be washed in either boiling water or boiling lees, and then thoroughly dried and aired in open air.

8. All the berths of the crew, and cabins of the passengers, and all the articles of furniture therein, and all the space occupied by so much of the cargo as is subject to disinfection, must be thoroughly cleansed by means of brushing, scrubbing, and washing with boiling water, and subsequent drying and airing.

9. The hold of the vessel must be disinfected in the following manner: the hold is connected by means of a length of hose with the forcing arm of a pump, a stream of sea water is poured on each part to be washed, which must be preliminarily scraped and scrubbed; the washing can be considered as sufficient only at the moment when the water pumped out of the hold is as clean as that last pumped in, whereupon all the compartments of the hold are to be abundantly and protractedly aired, using, if necessary, an air pump. Sailing vessels, which have no steam pumps of their own, may use the pumps of steam tugs and other similar vessels in port.

10. All the persons on board must wash themselves with green soap (take a common bath) and put on disinfected clothing.

11. Vessels with foul bills in regard to cholera, and also vessels assimilated thereto, are indispensably subject, besides the systematic disinfection, to measures of quarantine disinfection.

12. For quarantine disinfection the following means must be used: 1, an aqueous solution of carbolic acid (1 : 18); 2, an aqueous solution of bichloride of mercury (1 : 1000) and 3, aqueous vapor at a temperature of not less than 100° C.

13. All articles enumerated in section 7, when on board of vessels with foul cholera bills, must be disinfected by means of carbolic acid or hot vapor. The

articles must be either submerged for forty-eight hours in the carbolic acid solution (1 : 18), or be subjected to the action of hot vapor having a temperature of not less than 100° C. The vapor is introduced into the spaces occupied by the articles for a length of time proportioned to the nature of the articles, and other circumstances: for objects easily permeable, not less than one hour; for less permeable objects, two hours at the least. The time will be reckoned from the moment when the temperature of the vapor coming out of the room operated upon will have reached 100° C. Upon the completion of the processes of disinfection, the articles subjected thereto must be washed, dried, and aired in the manner described in section 7.

14. On vessels with unclean bills, the rooms specified in section 8 must be disinfected by means of carbolic acid solution (1 : 18), the ceilings, walls, floors, and other parts and objects are to be scrubbed with mops or rags soaked in the solution, or else the rooms must be subjected to the action of hot vapor, as described in section 13.

15. The disinfection of the hold and its contents is to be effected by means of corrosive sublimate, according to the greater or less quantity of water accumulated in the hold, allowing one pound of sublimate for each thousand pounds of water in the hold; 1¼ to 2½ pounds of sublimate are to be dissolved in a wooden vessel, in 25 to 50 pounds of water. A complete solution, with the assistance of constant stirring, will require about two hours. This solution is poured into the water in the hold, and is carefully mixed therewith by stirring for at least an hour. Each separate compartment of the hold must be thus disinfected. Such compartments in a hold as are connected by hatches may, upon the opening of the hatches and the establishment of a thorough communication between them, be included in one operation.

In order to ascertain whether this disinfection is equal to its object, the following test is to be made: Take samples of the disinfecting fluid from various parts of the hold, dip into them the ends of strips of copper made clean by rubbing with polishing paper, or by sulphuric acid, and see whether, upon remaining for two minutes in the liquid, and being taken out, the ends of the strips are covered with a distinct gray film, which may be easily rubbed off. If no such film appears, the disinfection must be held to be unsatisfactory, and must be continued by fresh additions of sublimate solution, and stirring of the water in the hold, until it yields the indicated reaction upon the copper strip. After the saturation of the water in the hold, as above described, it must be left to stand for twenty-four hours. After it has stood in the hold for at least twenty-four hours, the disinfected water must be pumped out, and sea-water pumped in, in a quantity equal to that pumped out. In order to remove the disinfectant as thoroughly as possible, the hold must be filled with sea-water and emptied, alternately, at least three times within the succeeding three days.

A COMPARISON BETWEEN THE BRITISH AND THE AMERICAN MEDICAL ASSOCIATION.—*The London Medical Times*, in an editorial upon the late meeting of the British Medical Association, says: "It must be admitted that, except for occasional lapses, both the Association and the journal which forms its *raison d'être* have been conducted with a discretion amounting almost to genius. The lamentable muddle into which the sister Association in the United States has thrown the medical profession in that country, has come upon us as a revelation, to make us grateful for the policy which has kept our own Association free, on the whole, from the machinations of self-seeking wire-pullers, and has kept a sufficient place of honor for the scientific leaders of the profession. Reading of what has recently happened across the Atlantic, we ought to be thankful that the powers of our own Association have not been abused, as they might have been, to the forcing upon us of leaders whose only claim to leadership is skill in the lobby."

UNIVERSITY OF VERMONT.—Dr. Leroy M. Bingham, of Burlington, Vt., has been appointed Professor of Surgery in the University of Vermont, to succeed the late Dr. J. L. Little, of New York.

DR. GIOVANNI BATTISTA SORESINA, founder of the *Giornale Italiano delle malattie Veneree e delle Pelle*, died recently at the advanced age of eighty-two.

PROF. VOLKMANN.—The honor of nobility has been conferred on Dr. Richard Volkmann, Professor of Surgery in the University of Halle.

DR. LAZAREWITCH, the eminent Professor of Obstetrics and Gynecology in the University of Kharhoff, having occupied the Chair for the full legal term, has been appointed Emeritus Professor.

PROFESSOR MILNE-EDWARDS.—The death, at Paris, of this eminent professor, at the advanced age of eighty-five, is just announced. He was born, of English parentage, at Bruges, in 1800, and studied medicine at Paris. In 1841, he was elected Professor at the Jardin des Plantes, eventually succeeding Geoffrey St. Hilaire. He was a Grand Officer of the Legion of Honor. His services to science are well known, and his most important contributions are contained in the twelve volumes of his *Leçons sur la Physiologie et l'Anatomie Comparée de l'Homme et des Animaux* (1857–1877).

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 4 TO AUGUST 10, 1885.

J. M. BROWN, *Surgeon*, CLARENCE EWEN, A. W. TAYLOR, *Assistant Surgeons*.—Ordered to rejoin their proper stations in the Department of the Platte.—*A. G. O., No. 7, Division of the Missouri*, August 1, 1885.

G. L. EDIE, and C. S. BLACK, *Assistant Surgeons*.—Ordered to rejoin their proper stations in the Department of Texas.—*A. G. O., No. 7, Department of the Missouri*, August 1, 1885.

WILLIAM D. DIETZ, *First Lieutenant and Assistant Surgeon*.—Ordered from Fort Selden to Fort Stanton, N. M.—*S. O. 111, Department of the Missouri*, July 31, 1885.

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